REPORT DOCUMENTATION PAGE		*Form Approved* *OMB No. 0704-0188*

1. REPORT DATE *(DD-MM-YYYY)* 26 April 2012	2. REPORT TYPE Master's Thesis	3. DATES COVERED *(From - To)* 25 July 2011 - 17 June 2012

4. TITLE AND SUBTITLE

THROUGH THE LIBYAN LOOKING GLASS

5a. CONTRACT NUMBER

5b. GRANT NUMBER

5c. PROGRAM ELEMENT NUMBER

6. AUTHOR(S)

Wing Commander John S. Williamson, RAF

5d. PROJECT NUMBER

5e. TASK NUMBER

5f. WORK UNIT NUMBER

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)

Joint Forces Staff College
Joint Advanced Warfighting School
7800 Hampton BLVD.
Norfolk, VA 23511-1702

8. PERFORMING ORGANIZATION REPORT NUMBER

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)

10. SPONSOR/MONITOR'S ACRONYM(S)

11. SPONSOR/MONITOR'S REPORT NUMBER(S)

12. DISTRIBUTION/AVAILABILITY STATEMENT

Approved for public release, distribution is unlimited.

13. SUPPLEMENTARY NOTES

14. ABSTRACT

The emergence of the Arab Spring and the NATO military participation in Libya are testament to the volatility and unpredictability of the world. Who would have considered in January 2011 that NATO would be at war in a Muslim country by March of the same year? The Libyan operation (March 19 – October 31, 2011) provides a unique opportunity to assess the effectiveness of NATO at a critical time for military decision makers in Europe and the United States. The assessment of NATO's performance during the Libyan operation provides an essential perspective on the effectiveness of the Alliance and, in particular, the ability of the European nations to deal with future challenges in an unpredictable world. This paper will identify three key areas where the United States should consider investing in NATO: intelligence surveillance and reconnaissance, operational planning, and targeting. The thesis will argue that by investing in the intellectual capital of NATO in these three key areas, the United States will ensure that NATO is prepared to fight future wars with a more limited U.S. presence.

15. SUBJECT TERMS

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT	b. ABSTRACT	c. THIS PAGE	Unclassified Unlimited	85	
Unclassified	Unclassified	Unclassified			19b. TELEPHONE NUMBER *(Include area code)* 757-443-6301

Standard Form 298 (Rev. 8/98)
Prescribed by ANSI Std. Z39.18

NATIONAL DEFENSE UNIVERSITY

JOINT FORCES STAFF COLLEGE

JOINT ADVANCED WARFIGHTING SCHOOL

THROUGH THE LIBYAN LOOKING GLASS

by

JOHN STEWART WILLIAMSON

WING COMMANDER ROYAL AIR FORCE

THROUGH THE LIBYAN LOOKING GLASS
BY

JOHN STEWART WILLIAMSON

WING COMMANDER, ROYAL AIR FORCE
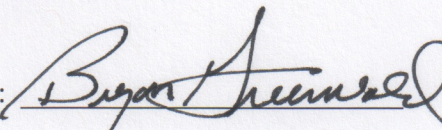
A paper submitted to the Faculty of the Joint Advanced Warfighting School in partial satisfaction of the requirements of a Master of Science Degree in Joint Campaign Planning and Strategy. The contents of this paper reflect my own personal views and are not necessarily endorsed by the Joint Forces Staff College or the Department of Defense.

This paper is entirely my own work except as documented in footnotes.

Signature: _____

May 22, 2012
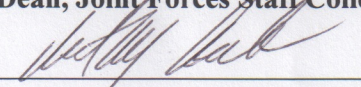
Thesis Adviser: Signature: _____

Bryon Greenwald, PhD
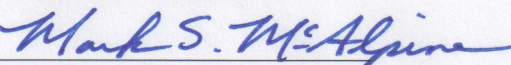
Dean, Joint Forces Staff College

Approved by: Signature: _____
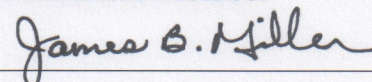
Robert M. Antis, PhD

Commitee Member

Signature: _____

Mark S. McAlpine, DIA Chair

Committee Member

Signature: _____

James B. Miller, Colonel, USMC,

Director, Joint Advanced Warfighting School

ABSTRACT

The emergence of the Arab Spring and the North Atlantic Treaty Organisation (NATO) military participation in Libya are testament to the volatility and unpredictability of the world. Who would have considered in January 2011 that NATO would be at war in a Muslim country by March of the same year? The Libyan operation (March 19 – October 31, 2011) provides a unique opportunity to assess the effectiveness of NATO at a critical time for military decision makers in Europe and the United States (US). The new US Department of Defense strategy guidance for the 21st Century places Asia and the Pacific as the main strategic focus, but indicates that the European commitment will be maintained. Nevertheless, the challenge for decision makers is that they must fulfil the national objectives whilst minimising the cost to the military budget. At this critical time the assessment of NATO's performance during the Libyan operation provides an essential perspective on the effectiveness of the alliance and, in particular, the ability of the European nations to deal with future challenges in an unpredictable world. This paper will identify three key areas where the United States should consider investing in NATO: intelligence surveillance and reconnaissance, operational planning, and targeting. The thesis will argue that by investing in the intellectual capital of NATO in these three key areas, the US will ensure that NATO is prepared to fight future wars with a more limited US presence. How the US chooses to invest in NATO's intellectual capital will determine the viability of NATO as a strategic partner in the future.

ACKNOWLEDGEMENT

DEDICATION

To my wife and children for all your support and patience through the long nights and missed weekends.

TABLE OF CONTENTS

TABLE OF FIGURES

INTRODUCTION

On October 20, 2011, Muammar Gaddafi, the leader of the Libyan state, died at the hands of rebel forces in his hometown of Surt.[1] The violent end to Gaddafi's life was the culmination of a conflict that started with peaceful protests in Benghazi in February 2011 and resulted in the North Atlantic Treaty Organisation (NATO) going to war to protect the Libyan civilian population.

The emergence of the Arab Spring and NATO's military participation in Libya are a demonstration of the volatility and unpredictability of the world. Who would have considered in January 2011 that NATO would be at war in a Muslim country by March of the same year? The Libyan operation was also a watershed for the United States (US) and NATO. For the first time in its history, the European NATO nations were required to lead a major combat operation in the absence of overwhelming US support. NATO ultimately succeeded, and on first analysis the operation was both an operational and strategic success. The Libyan population gained their liberty from a tyrannical leader and a broad coalition of countries from the West and East came together to support the demands of the United Nations Security Council.[2] Furthermore, NATO was able to project itself, not only as a regional, but as a global alliance, able to react to crises outside European borders. Thus, NATO had fulfilled its 2010 Strategic Concept, a vision of NATO as an effective global entity.[3] The Libyan crisis was exactly the type of military operation that conformed to the new vision. Yet, a closer examination of the Libyan conflict reveals ominous shortfalls in NATO's capability that portent to an uncertain future.

---

[1] Barry Malone, "Gaddafi killed in Home Town," Reuters, http://www.reuters.com/article/2011/10/20/us-libya-idUSTRE79F1FK20111020 (accessed January 3, 2012).

[2] United Nations Security Council, "UNSCR 1973," UN.org, http://www.nato.int/cps/en/SID-E403D555-2A5EEC9A/natolive/news_71689.htm?mode=pressrelease (accessed October 28, 2011).

[3] Secretary General of NATO, *Strategic Concept: For the Defence and Security of The Members of the North Atlantic Treaty Organisation (*Brussels: NATO Public Diplomacy Division, 2010), 1.

As the Libyan crisis began to ignite in February 2011, the international community coalesced around the United Kingdom and France as the principal political advocates of intervention in Libya.[4] The US did not have the political will or the military capacity to become engaged in another potentially long discretionary conflict, but felt obligated to intervene and assist its allies in the Libyan crisis.[5] The NATO nations agreed that the US, with the forces and command structure present in Europe, would lead an initial coalition to react to the imminent threat, but NATO would take command of the operation at a suitable juncture, with the US taking a more limited role. When the US-led coalition began conducting operations over Libyan air space on March 17, 2011 as part of Joint Task Force ODYSSEY DAWN, the key question was whether NATO had the capability to take over command of the complex war without overwhelming US support.[6]

On March 28, 2011, NATO took command of the operations in Libya as part of Operation UNIFIED PROTECTOR. NATO, however, struggled to come to terms with the complexity of the task and risked losing the initiative to Gaddafi's forces during the transition of command. Although NATO forces eventually regained the operational initiative from pro-Gaddafi forces, the fog and friction of the first weeks of the conflict exposed a critical capability gap within NATO. The depth of NATO's reliance on the US military had masked critical shortfalls in the capability of the other alliance members. The critical lack of investment by European nations in their defense capabilities was exposed when the US reduced its

---

[4] Dr Jonathan Eyal, "Accidental Heroes: Britain France and the Libya Operations," *Royal United Services Institute*, An Interim RUSI Campaign Report (September 2011): 1.

[5] Clark A. Murdock, and Becca Smith, *"The Libyan Intervention: A Study In US Grand Strategy," Global Forecast for 2011,* (June 2011): 61-63.

[6] US Joint Chiefs of Staff, Joint and Coalition Operational Analysis, *Libya: Operation ODYSSEY DAWN (OOD). A Case Study in Command and Control, (Oct 11)* (Suffolk, Virginia: Joint and Coalition Operational Analysis (JCOA), October 2011), 7.

involvement.[7] This shortfall almost led to a significant operational failure, which a more capable

adversary may have been able to exploit. It is telling, that the same shortfalls were revealed in

the criticisms levelled at NATO after the Kosovo campaign in 1999.[8]

In 2002, a Research and Development Corporation (RAND) study heavily criticised

European NATO nations for an overreliance on the US for the provision of military power.[9] The

European nations were also criticised for a lack of investment in their own military capabilities.

The analysis of the Libyan operation reveals that since 1999 very little has changed. To

compound the issue, there appears to be no obvious solution to the shortfalls. The European

NATO nations are experiencing unprecedented fiscal challenges that have required governments

to undertake unparalleled reviews of standing military capability. The cumulative impact of

these issues is a long-term constraint on the ability of the European nations to generate sufficient

forces to support future NATO operations.

The United States Government (USG), particularly former Secretary of Defense Robert

Gates, has been frustrated by the lack of equity and a perceived lack of commitment by European

nations in supporting NATO's military capability. Secretary Gates was highly critical of the lack

of financial commitment by European nations within NATO and stated that NATO faced

"military irrelevance" unless European nations started to invest in defence.[10] These comments

may have been borne out of frustration, but they carry a very real warning regarding the future

US commitment to NATO.

---

[7] Eyal, "Accidental Heroes," 8.

[8] Bruce R. Nardulli, Walter L. Perry, Bruce Pirnie, John Gorgon IV and John G. McGinn, *Disjointed War: Military Operations in Kosovo, 1999* (Santa Monica: RAND, 2002), 21.

[9] Ibid., 21.

[10] Robert M. Gates, "Blunt US Warning Reveals Deep Strains in NATO," NY Times.com, http://www.nytimes.com/2011/06/11/world/europe/11nato.html?pagewanted=all (accessed January 29, 2012).

The new Department of Defense strategic guidance for the 21st Century places Asia and the Pacific as the main strategic focus, but indicates that the European commitment will be maintained.[11] Nevertheless, the strategic calculus has changed and the challenge for decision makers is that the national objectives must be achieved whilst minimising the cost to the military budget. The enduring US support for NATO and Europe must evolve if it is to continue to bolster NATO military readiness. The question is how can the US ensure that NATO remains a credible military force when the US can only commit to Europe as a secondary objective?

As NATO and the US now consider the lessons identified from the Libyan operation, the challenge will be to develop a strategy that will address the key deficiencies experienced during the Libyan campaign. Specifically, in an austere fiscal environment, how can the US increase NATO's war fighting effectiveness without taking the lead or continuing to provide overwhelming military support? This thesis will recommend how the US should invest in NATO to deliver a sustainable alliance prepared to fight future wars. It will also set the context for some hard choices for NATO and the US as they determine how NATO should develop.[12]

Chapter I will evaluate the current and future fiscal environment and its impact on US defense investments. Over the next ten years, the US military will make major spending reductions.[13] Yet, the threat to US national security has not diminished; if anything, it has

---

[11] US President, *Sustaining Global Leadership: Priorities for 21st Century Defense* (Washington D.C.: Government Printing Office, January 2011), 1.

[12] The first major ministerial to discuss the future of NATO will be conducted in Chicago on 20-21 May 2012. NATO, "NATO Chicago Summit in 2012," NATO Website, http://www.nato.int/cps/en/natolive/news_82097.htm (accessed January 23, 2012).

[13] The Budget Control Act (BCA), signed into US law in August 2011 as part of negotiations over raising the US debt ceiling, imposes discretionary spending caps from Fiscal Year (FY) 2012 to FY 2021. It also established a Joint Select Committee on Deficit Reduction to identify at least $1.5 trillion in additional savings. The sequestration process has been implemented that will impose automatic spending reduction of $1.2 trillion in discretionary and mandatory spending from FY 2013 to 2021. For more read: Lieutenant General David W Barno USA (Ret.), Nora Bensahel and Travis Sharp, *Hard Choices Responsible Defense in an Age of Austerity,* (Washington D.C.: Center for a New American Security, October 2011): 7.

increased and become more diverse and unpredictable. The USG must make difficult decisions on how to allocate its future budget. Most critically, how will the US plan its posture within European and its future support of NATO?

The dilemma for the USG is that NATO has been an enduring part of the US national security strategy since World War II, but the Department of Defense's strategic guidance shifts the national strategy towards the Asia/Pacific region, placing strain on the continued level of support to Europe.[14] The decisions made in Washington DC, must be informed by the challenges currently being experienced by other major NATO partners. This paper will assess the impact of defence reviews in the United Kingdom, Germany, France and Italy, and will identify what lessons can be drawn. With Robert Gates' warnings on the future relevance of NATO still reverberating around Europe, the enforced European defence cuts will undoubtedly further impact on the future form of NATO's military capability. US decision makers should look towards the actions taken in Europe, and the lessons learnt, to assist them in making informed financial cuts. How the US decides to act may also be shaped by decisions made during previous periods of austerity.

Chapter II of this thesis traces the evolution of US policy towards NATO during periods of economic hardship. The US made key policy decisions during previous periods of austerity, specifically after the Vietnam War and at the end of the Cold War, that have been significant in the evolution of NATO. However, there has been a constant tension between the US and her European allies during these periods. The US has exercised its hegemonic power to foster security in Europe, but tension has remained due to the US perception of a lack of commitment

---

[14] US President, *Sustaining Global Leadership,* 1.

by European governments to achieve agreed-upon levels of military expenditure.[15] After two costly wars in Afghanistan and Iraq, a budget and deficit crisis, and an interminable economic recession, the US can no longer wield the overwhelming military capability it did after the Vietnam War and the Cold War that sustained NATO as a credible military force. Clearly, a new approach to NATO force planning and NATO's relationship with the US is required. An analysis of the Libyan crisis provides the opportunity to identify how to achieve this balance.

Chapter III will analyse the build up to, and reasons behind, NATO going to war in Libya. The chapter will analyse the impact of the US, operating in a less overt role, on NATO's operational performance. It will focus on the critical period in March 2011, during the transition of command between the US-led coalition and the NATO-led coalition. The transition to NATO command exposed a lack of decisive decision-making and exposed NATO's lack of ability to manage a complex operation. By appraising the factors that hindered NATO's decision-making, it will then be possible to identify the key vulnerabilities that must be addressed.

Chapter IV will propose how the US can enhance NATO's operational capability without significant financial cost. The chapter will assess the main theories of intellectual capital and how they can be applied to the military, detailing how intellectual capital can influence military decision-making. Applying the theories to the evaluation of the Libyan campaign, the paper will provide a series of recommendations for how the US should consider investing smartly in NATO. How the US invests smartly in NATO's intellectual capital will determine the viability of NATO as a strategic partner in the future.

---

[15] Robert Gates, "Gates' Speech on the NATO Strategic Concept, February 2010,"*Council on Foreign Affairs,* February 11, 2010, under "Gates' Speech on the NATO Strategic Concept,"http://www.cfr.org/nato/gates-speech-nato-strategic-concept-february-2010/p21518 (accessed September 25, 2011).

CHAPTER I

NATO: LOVE IN A COLD ECONOMIC CLIMATE?

The debate on the role of North Atlantic Treaty Organisation (NATO) as part of the

United States (US) national strategy is as enduring as the alliance itself. NATO and Europe have

been a core part of US security planning since the formation of the Alliance in 1949. The *raison*

d'être for NATO was a collective defence to counter the pervasive Soviet expansionist threat in

Western Europe. Article V of the Washington Treaty defines NATO collective defence and has

remained at the core of the requirement for NATO, providing an unambiguous statement of

NATO's purpose.[1] Yet as the threat environment has changed since the fall of the Soviet Union,

the role of NATO has adapted to the changing international milieu, and it has been the US, as

NATO's principle economic and military provider, that has supported and driven NATO's

capability forward.[2]

Although NATO has been a preeminent part of the US strategy for over 60 years,

whenever there is a debate on a reduction in the military budgets, the future of NATO becomes a

point of conjecture. Even after NATO's establishment in 1949, the US was required to balance

---

[1] Article 5 of the North Atlantic Treaty states: The Parties agree that an armed attack against one or more of them in Europe or North America shall be considered an attack against them all and consequently they agree that, if such an armed attack occurs, each of them, in exercise of the right of individual or collective self-defence recognised by Article 51 of the Charter of the United Nations, will assist the Party or Parties so attacked by taking forthwith, individually and in concert with the other Parties, such action as it deems necessary, including the use of armed force, to restore and maintain the security of the North Atlantic area. Any such armed attack and all measures taken as a result thereof shall immediately be reported to the Security Council. Such measures shall be terminated when the Security Council has taken the measures necessary to restore and maintain international peace and security. North Atlantic Treaty Organization, *NATO Handbook* (Brussels: NATO Office of Information and Press, 2006), 370.

[2] "Member countries make direct contributions to budgets managed directly by NATO, in accordance with an agreed cost-sharing formula broadly calculated in relation to their ability to pay." The U.S. makes the biggest singular contribution based on per capita income and a series of other factors. This US contribution has ranged from 22-25% of NATO funding. Ibid., 57 and Congressional Research Service, *NATO Common Funds Burden sharing: Background and Current Issues*, *by the Congressional Research Service*, (Washington DC: Government Printing Office, 2010), 4.

its military forces variously between occupation in Europe, occupation in Japan, a war in Korea, and combating an existential threat from the Soviet Union.

By the mid-1960s, the overriding need to balance the national budget brought into question the level of NATO support and the requirement for European nations to take greater responsibility of their own domestic affairs. Over thirty US Senators went on record as favouring major withdrawals of US forces from Europe and NATO.[3] The domestic financial and political pressures, including supporting the war in Vietnam and attempting to balance the budget, focussed US domestic attention on the cost of NATO. These Senators suggested that the US should "confront the Europeans boldly and soon with the unsatisfactory nature of the current burden-sharing, explain the necessity for their taking a new view of the European security problem, and offer a plan to carry out some basic changes in the Alliance."[4]

The Russian invasion of Czechoslovakia in August 1968 defused Senatorial frustration and refocused the debate on the Soviet threat, but the sentiments of the statements written by the Senators in the 1960s highlighted a tension between the US' European policy and the US perception of the European nations' contribution to NATO. The statements resonate with the same sentiments that Robert Gates expressed during his tenure as Secretary of Defense.

EUROPE FEELS THE PINCH

As Secretary of Defense from December 18, 2006 to July 1, 2011, Robert Gates constantly voiced his frustration with the NATO Alliance members. Gates was particularly vocal in articulating his frustrations with the European nations' lack of financial commitment to maintain their military capabilities, stating that:

---

[3] Alain C. Enthoven and Wayne K. Smith, "What Force for NATO? And From Whom," *Foreign Affairs* Vol. 48, Issue 1, (October 1969): 80-96.

[4] Ibid., 80-96.

These budget limitations relate to a larger cultural and political trend affecting the Alliance. The demilitarization of Europe – where large swathes of the general public and political class are averse to military force and the risks that go with it – has gone from a blessing in the 20th century to an impediment to achieving real security and lasting peace in the 21st. Not only can real or perceived weakness be a temptation to miscalculation and aggression, but, on a more basic level, the resulting funding and capability shortfalls make it difficult to operate and fight together to confront shared threats.[5]

Perhaps Secretary Gates had good grounds on which to base his criticism. In 2010, only five of the twenty-eight member states had fulfilled the agreed NATO defence spending targets of two percent of national Gross Domestic Product (GDP).[6] Secretary Gates questioned the European nations' adherence to their NATO responsibility, and by implication, the very foundations and continuation of US support to NATO and Europe.[7] Gates' statements were undoubtedly borne from frustration as he departed office, but the statements served to remind the European nations of their NATO obligations as they reviewed their national military strategies.

The United Kingdom (UK) and Germany have undergone significant defence reviews since 2010. Upon taking office from the Labour Party in May 2010, the new Conservative British Prime Minister, David Cameron, established the requirement for a revision to the UK National Security Strategy and the drafting of a Strategic Defence and Security Review (SDSR). The principal requirement was to "get the UK economy back on track" and the drafting of a new SDSR would contribute towards the new government establishing a clear strategy early in their administration, and importantly balance the defence budget, which was in deficit after long wars

---

[5] Robert Gates, "Gates' Speech on the NATO Strategic Concept, February 2010."

[6] Ibid. The five nations who fulfilled their financial commitment were the United States (5.4%), United Kingdom (2.7%), France (2%), Greece (2%) and Albania (3%), from, NATO, "Financial and Economic Data Relating to NATO Defence," NATO Website, http://www.nato.int/nato_static/assets/pdf/pdf_2011_03/20110309_PR_CP_2011_027.pdf (accessed February 27, 2012).

[7] Under Article 3 of the North Atlantic Treaty the Treaty states: In order more effectively to achieve the objectives of this Treaty, the Parties, separately and jointly, by means of continuous and effective self-help and mutual aid, will maintain and develop their individual and collective capabilities to resist armed attack. North Atlantic Treaty Organization, *NATO Handbook*, 370.

in Afghanistan and Iraq.[8] To determine how to balance the budget and to provide guidance for

the type of force required by 2020, the UK produced a National Security Strategy based on the

theory of *ends, ways and means*.[9]

The strategic *ends* articulated within the UK National Security Strategy established the

requirement for a stable domestic environment and the requirement for the national contribution

to a stable international environment. The *ways* articulated how the UK would plan to achieve

its strategic *ends*, specifically, the need to strengthen alliances and partnerships. Throughout the

UK National Security Strategy, the UK retains NATO as a core requirement. Within the

National Security Strategy, the UK makes a commitment that it will maintain its military budget

at two percent of GDP, the key stipulation of the level of military spending required to support

NATO. The UK National Security Strategy reinforces the importance of NATO by stating,

"Through NATO, the European Union [EU] and other alliances we share our security needs and

gain collective security benefits."[10] Notwithstanding the articulation of a new strategy, the new

government demanded that the Ministry of Defence (MOD) make "At least £4.3 billion of non

frontline savings over the (2010-2015) Spending Review period."[11] These savings targets

required the MOD to make difficult decisions on how to transform the existing *means* to support

the revised UK strategic *ends and ways*. To achieve the savings targets set by the Treasury, the

UK MOD retired equipment such as the HARRIER GR9 Vertical Short Take Off and Landing

Fast Jet, and withdrew the SENTINAL R1 Advanced Standoff Radar from service early,

---

[8] HM Government, *Securing Britain in an Age of Uncertainty: The Strategic Defence and Security Review* (London: The Stationary Office, September 2010), 3. The theory of "ends, ways and means," is derived from Henry C. Bartlett, G. Paul Holman Jr. and Timothy E. Soames, "The Art of Strategy and Force Planning," in *Strategy and Force Planning* (Newport, RI: Naval War College Press, 2004), 17-33.

[9] Ibid., 10.

[10] Ibid., 15.

[11] HM Treasury, *Spending Review 2010* (London: The Stationary Office, October 2010), 57-58.

removed wholesale capabilities such as the NIMROD maritime patrol capability from the defence inventory, and reduced overall force numbers.[12]

The German defence review also provided a similar emphasis on maintaining focus on the international arena whilst rationalising their overall force size. The German defence Secretary stated, "The Bundeswehr must be capable of delivering an essential contribution to NATO, the European Union and the United Nations, which would be adequate to Germany's role in the world."[13] Although the sentiment was positive, the resulting budget cuts and troop reductions will limit the German ability to support NATO in the future. The German defence budget dropped 20% and included the reduction and restructuring of the military forces from 185,000 to a professional force of 65,000. The cuts include the closure of one TORNADO fighter-bomber wing, two TRANSALL airlift wings, one transport helicopter regiment, one combat helicopter wing and a naval aviation unit. The Bunderswehr has also been required to conduct a significant renegotiation of future equipment programmes such as the TIGER attack helicopter.[14]

In France, the military budget is currently under review with a White Paper expected to be released after the April 2012 Presidential elections, but the French Ministry of Defence has a projected budget shortfall of €36 billion through 2020. Unless France can buck the trend within NATO and invest heavily in defence, the French military will reduce in size.[15] Further east, the

---

[12] BMT Hi-Q Sigma Ltd, *White Paper: The Implications of the SDSR* (Bristol, UK, BMT Hi-Q Marketing Department, 2010), 4.

[13] Albrecht Muller, "German Military To Cut Troops, Generals," *DefenseNews Online,* May 18, 2011, under "German Defense Cuts,"http://www.defensenews.com/story.php?i=6543754 (accessed October 5, 2011).

[14] Chris Pockock, "German Defense Cuts Force Renegotiation with EADS," AIN Online, http://www.ainonline.com/?q=aviation-news/ain-defense-perspective/2011-11-04/german-defense-cuts-force-renegotiation-eads (accessed January 23, 2011).

[15] Pierre Train, "France Raises Defense Budget 1.6 Percent," *DefenseNews*, September 29, 2011, under "French military spending," http://www.defensenews.com/article/20110929/DEFSECT05/109290305/France-Raises-Defense-Budget-1-6-Percent, (accessed February 27, 2012).

Italian financial crisis has hit the military and defence industry hard. The Government has imposed a further 10 percent reduction in the military budget across all Services that compounded planned contractions in the annual defence budget, putting major programmes such as the EUROFIGHTER, FREMM frigates, and new Freccia armored vehicles at risk.[16]

After the series of force reductions across Europe, the emerging risk to achieving the NATO strategic ends is that the cumulative effect of the downscaling of European militaries will restrict the means available to NATO commanders even further. For example, the reduction in the UK defence budget has constrained the flexibility of its armed forces to conduct a full range of military operations. With the cancellation of the NIMROD programme, the UK no longer maintains a Maritime Patrol Aircraft that can provide maritime early warning for NATO across the North Atlantic, leaving the UK reliant on its allies to provide this capability. The UK decision reinforces the assertion that the requirement to build coalitions and contribute to NATO has become an increasingly important part of national strategy to achieve national objectives and interests.

The inherent strategic risk for NATO is that it cannot control the decisions of individual nations and the outcome of the revised national strategies may result in critical capability shortfalls across the alliance.[17] The NATO Secretary General, Anders Fogh Rasmussen, has

---

[16] FREMM is an abbreviation of, FREgate Multi Mission or FREgata Multi Missione, a Franco-Italian programme to develop a capable and, ironically, affordable warship. Tom Kington, "Italian Military Hit by 10% Budget Cut," *DefenceNews*, May 29, 2011, under "Italian military spending," http://www.defensenews.com/article/20100527/DEFSECT02/5270303/Italian-Military-Hit-by-10-Budget-Cut, (accessed February 25, 2012).

[17] BMT Hi-Q Sigma Ltd, *White Paper. The Implications of the SDSR*, 4.

termed the need to develop a coordinated approach to NATO capability "Smart Defence."[18]

Rasmussen stated that,

> Pooling and sharing are vital if we want to develop our military expertise and capabilities and NATO is best placed to identify and connect nations that have similar needs but not enough money to build a capability on their own.[19]

The current period of fiscal austerity makes attaining the objectives of Smart Defence even more challenging and fraught with risk. The issue of pooling and ensuring equitable and effective sharing of the economic and strategic burden has consistently vexed NATO from its earliest days. Even in the early 1950s, academics and politicians were wrestling with the complexity of readying a military capability composed of forces from many dissimilar nations.[20] The current challenges are reflective of the constant tension between national strategy and interests and alliance members' contribution to NATO. The US must learn from the experiences of European Governments, and consider how best to contribute to the Smart Defence initiative to determine how NATO can support US National Security Strategy effectively in the future.

US AUSTERITY – 10 YEARS OF PAIN?

The outcomes of the European defence reviews have placed additional pressure on the ability of European nations to provide the requisite levels of military capability to NATO. The implications of exactly what NATO capability will emerge from the current economic environment is unclear; but, in an ironic twist, NATO and its European partners are concerned about the potential effects of significant US defence cuts on the Alliance. Initial indications are that the US' budget cuts will be substantial and far reaching. The impact of Operations ENDURING FREEDOM and IRAQI FREEDOM has caused the US military to reach a point

---

[18] NATO Secretary General, "NATO Secretary General calls for "Smart Defence" at Munich Conference," NATO Website, http://www.nato.int/cps/en/natolive/news_70327.htm (accessed February 5, 2012).

[19] Ibid.

[20] Malcolm W. Hoag, "On NATO Pooling," *World Politics,* Vol. 10, No. 3 (April, 1958): 475-483.

where it is in desperate need of modernisation in key areas, but it has considerably less funding in real terms to develop a new military capability by 2020.[21]

The US faces a period of unprecedented financial privation. The Budget Control Act has directed that the Department of Defense must reduce expenditure by $487 billion over the next five years.[22] The US National Security Strategy (NSS) and the US Department of Defense Priorities for 21st Century Defense will direct where the savings are to be taken.[23] The 2010 NSS indicated intent to shift the US European strategy by stating that, "An international architecture [NATO] that was largely forged in the wake of World War II is buckling under the weight of new threats, making us less able to seize new opportunities."[24] The Priorities for 21st Century Defense issued in January 2011 continued the theme with a clear emphasis towards the Asia and Pacific region and maintaining security in the Middle East, but implied that the US would seek to examine its continued presence in Europe. The requirement to make significant savings, balanced against a shift in national policy, indicates that the US is seeking opportunities to rationalise its commitments, with Europe very much the focus of these decision. The strategic guidance within the document states that, "In keeping with our evolving strategic landscape, our posture in Europe must also evolve." [25] This statement confirms that the US is looking to renegotiate its long-term European posture.

---

[21] US Department of Defense, *Defense Budget: Priorities and Choices* (Washington D.C.: Government Printing Office, January 2012), 1, and Barno, *Hard Choices Responsible Defense in an Age of Austerity*, 7.

[22] US Department of Defense, *Defense Budget*, 1, and Todd Harrison, *Defense Funding in the Budget Control Act of 2011 (*Washington D.C.: Center for Strategic and Budgetary Assessments, 2011), 1.

[23] US President, *Sustaining Global Leadership*, 1, and Chairman of the Joint Chiefs of Staff, *The National Military Strategy of the United States of America* (Washington D.C.: Government Printing Office, February 2011), 3.

[24] US President, *National Security Strategy* (Washington D.C.: Government Printing Office, May 2010), 41.

[25] US President, *Sustaining US Global Leadership*, 3.

The statements in the NSS and the Priorities for 21st Century Defense have reinforced the concern within Europe that the US may no longer view NATO and Europe as a key strategic priority and a change in the US' relationship with NATO and Europe is about to occur. The concern was realised on February 12, 2012, when Secretary of Defense Panetta declared that two of the four US Army brigades in Europe were to be removed, with more forces likely to follow.[26]

Despite the concerns, the US has proven remarkably loyal to NATO during its evolution. The US Government's (USG) strategic interests have remained remarkably consistent since the end of World War II. Although different American leaders have adopted different ways and means to achieve the strategic interests, the overall guiding principles have fundamentally remained the same. Sir Michael Howard described the long-term US national strategy as a strategy to prepare for war fighting and to create deterrence, by combining the elements of national power to achieve the national objectives of wealth, opinion, allies and armed forces.[27] This definition still holds true for today; however, the calculus of the relative importance of Europe has shifted and this will have implications on how the Department of Defense budget will be allocated.

As Figure 1 illustrates, there have been peaks and troughs in US military spending since the formation of NATO in 1949. However, an assessment of the decisions the US took during these periods of austerity reveals a significant commitment to Europe and NATO. The analysis of the decisions taken after the last two periods of major budget reductions, following the Vietnam War and at the end of the Cold War, directly correlate with an increase in focus on Europe and NATO. In both the late 1970s and early 1980s, as the US emerged from the national

---

[26] Associated Press. "Panetta: Army to Withdraw 2 Brigades From Europe." NPR.Org. http://www.npr.org/templates/story/story.php?storyId=145133867 (accessed February 12, 2012).

[27] Sir Michael Howard, "Grand Strategy in the Twentieth Century," *Defence Studies*, Vol. 1. no. 1 (Spring 2001): 2.

malaise and strategic loss of the Vietnam War, and again in the 1990s after the demise of the

Soviet Union, the US rejected a tendency towards isolationism and invested heavily in the

security of Europe and in the capability of NATO.

DEPARTMENT OF DEFENSE BUDGET AUTHORITY
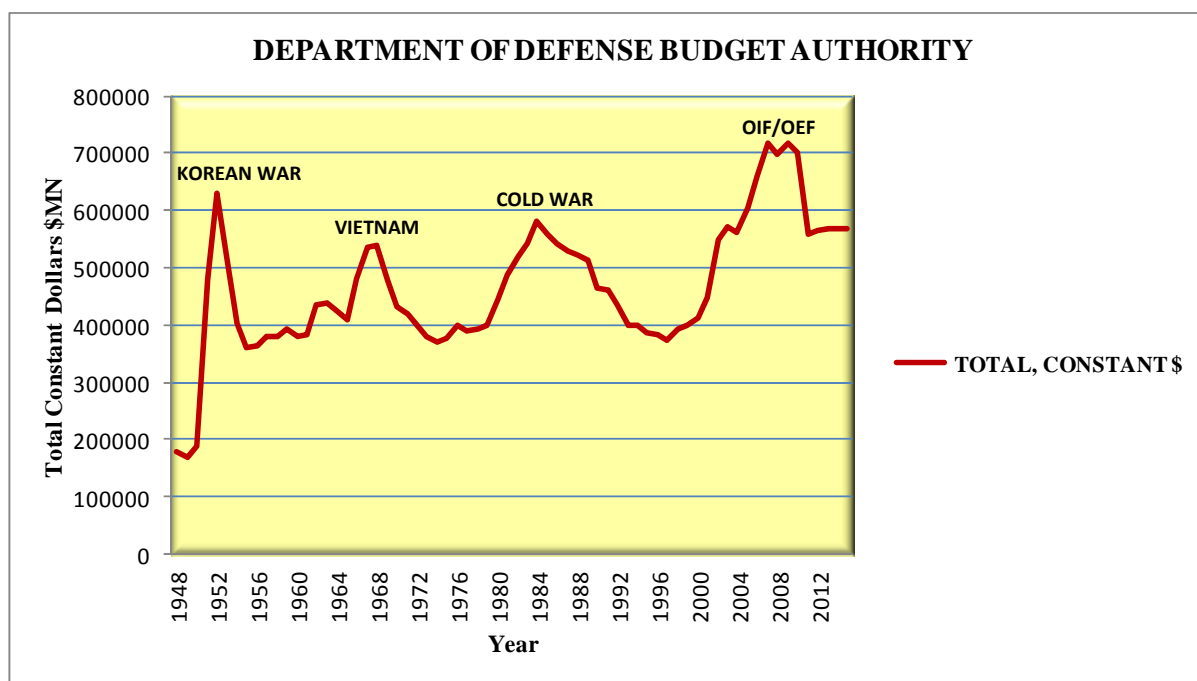
Figure 1. US Department Of Department (DOD) Budget Adjusted to Represent Constant Dollars. [28]

As part of the overall DOD budget, the US' contribution to NATO's common budget

over the last thirty years has been approximately 23-25 percent of the total cost of the NATO

common capability.[29] The direct funding of NATO has represented a pivotal part of transatlantic

and global strategy for all the nations involved. Of all the member nations, the US has made the

---

[28] Constant dollars measure the value of purchased goods and services at price levels that are the same as the base year level. The Budget Authority is the total DOD budget approved by Congress from, US Department of Defense. Comptroller, *National Defense Budget: Estimates for FY 2012* (Washington D.C.: Department of Defense, March 2011), 123-128, http://comptroller.defense.gov/defbudget/fy2012/FY12_Green_Book.pdf (accessed November 12, 2011).

[29] This direct funding does not cover the cost of deploying on a NATO operation. Any cost of a NATO deployment will fall to the contributing nations to fund these deployments from their own national budgets. This is the root requirement for the NATO nations to maintain military budget levels at two percent of GDP to maintain capable standing militaries across the Alliance. North Atlantic Treaty Organization, *NATO Handbook,* 57.

most significant financial contribution to NATO, providing the most significant contribution to

European security, with forces deployed constantly within Europe since 1945.[30] This paradigm

is now being challenged with the shift in policy towards the Pacific and an austere financial

environment. The assessment of the evolution of US' European strategy post-Vietnam and the

Cold War will provide an assessment of how the relationship between the US, Europe and

NATO has evolved, and how this shared history could influence contemporary decision-making.

---

[30] Tim Kane, "Global US Troop Deployment, 1950-2003," *The Heritage Foundation*, October 27, 2004, under "US troops deployed in Germany 1945-2012," http://www.heritage.org/research/reports/2004/10/global-us-troop-deployment-1950-2003 (accessed November 21, 2011).

CHAPTER II

THE FUTURE HAS A WAY OF ARRIVING UNANNOUNCED

During the last sixty years, the United States (US) has had a consistent European strategy. The US strategy has focussed on maintaining security within Europe and confronting the existential threat of the expansion of the Soviet Union. The achievement of the strategy has ensured that the US has been able to maintain its position of global power and leadership. The consistency of strategy is now being challenged by the change in focus of national policy towards the Pacific and the reduction in the military budgets.[1] Although the specific context of the choices the Department of Defense must make to amend the strategic emphasis to the Pacific are unique, the circumstances surrounding the current period of economic hardship correlate with two historical periods that marked turning points in the development of the North Atlantic Treaty Organisation (NATO) and Europe. Assessment of the US European policy post-Vietnam and post-Cold War will provide indicators of where consistency in US policy has enhanced the security of Europe and the capability of NATO. The assessment will help make the case that the US should continue to support NATO, even as it reduces the Department of Defense (DOD) budget and shifts its focus towards the Pacific. The crucial question then becomes *how* the US can continue its support given the fiscal and geographic shifts in policy.

POST-VIETNAM NATO

The most significant development of Cold War NATO military capability originated in America and occurred after the US withdrew from Vietnam. The US' strategy focussed on

---

[1] US President, *Priorities for the 21ˢᵗ Century*, 1-3.

regenerating the US military after the demoralizing war in Vietnam. The Nixon

Administration's intent was to address the fundamental problems inherent in the US Army at this

time, principally the lack of morale, cohesion and discipline.

> An entire American Army was sacrificed on the battlefield of Vietnam.
> When the war was finally over, the United States military had to build a new
> volunteer army from the smallest shreds of its tattered remnants.[2]

The Nixon Administration's plan to modernize the military was to professionalize the

force and follow the lead of the major NATO nations by transitioning to an all-volunteer force.[3]

The plan would reduce the overall force numbers from over 1.5 million men to 780,000, but

would remove the principal peacetime problems of lack of morale and discipline within the

military.[4]

The political aim was also ambitious; the US needed to regain prestige after the Vietnam

War, and the political focus fell back on to Europe. The Soviet Union had become

technologically more advanced and numerically superior to the US in the years in which the US

focussed on Vietnam. The decision to focus on the resumption of power politics between the

Soviet Union and the West placed NATO as a central enabler to the US strategy.[5]

The early 1970s were a challenging time for the US military. Not only was the

government drastically cutting military budgets and reducing the overall size of the military, but

the military was also outfitted with ageing equipment and faced an adversary in the Soviet Union

---

[2] Shelby L. Stanton, *The Rise and Fall of an American Army: US Ground Forces in Vietnam 1965-1973* (New York: Ballantine Books, 1985), 365.

[3] Beth Bailey, "The Army in the Marketplace: Recruiting an all-volunteer force," *The Journal of American History* 94, no. 1 (June 2007): 47-74.

[4] Gary L. Thompson, *Army Downsizing Following World War I, World War II, Vietnam: A Comparison To Recent Army Downsizing* (Ft Leavenworth: US Army Command and General Staff College, 2002), 7.

[5] Ibid, 7.

who had a significant technical and numerical advantage.[6] The US population was split on how to respond to the Soviet threat in the post-Vietnam era. The nation was split between a return to pre-World War II isolationism, with "come home America" sentiments prevalent across the nation, and the need to support NATO in Europe.[7] The neo-isolationists had support in Congress and their actions restricted the ability of the US to intervene abroad. However, the necessity to counter the Soviet threat and maintain the US standing in the world ultimately won the debate.[8]

The US Government's commitment to Europe and NATO was clear. The existential threat of the Soviet Union was present in Europe. The focus of the US strategy was to maintain the global balance of power and ensure that the Soviet Union did not obtain an insurmountable advantage that could not be overcome in the event of war. With the experience of Vietnam still fresh in the minds of the US military, it began to assess critically the way that it conducted warfare. It could not afford to fail again, and the most pressing threat was that of the Soviet Union in the European theatre. To regain the initiative in Europe and raise its standards, the Army reexamined how it planned to fight and win a war in Europe. Specifically, under the auspices of the US Army's Training and Doctrine Command (TRADOC), the Army retooled its intellectual foundations, beginning in 1976 with the publication of the Active Defense doctrine, followed in 1982 by the AirLand Battle doctrine.[9]

As the TRADOC Commander, General William E. DuPuy led the development of Active Defense. TRADOC's development of the concept of Active Defense focussed on delaying the

---

[6] Thompson, *Army Downsizing Following World War I, World War II, Vietnam*, 9.

[7] Senator George McGovern, "Senator McGovern Acceptance Speech at Democratic National Convention Miami Beach, Florida July 14, 1972," 4President.org, http://www.4president.org/speeches/mcgovern1972acceptance.htm (accessed October 12, 2011).

[8] Julian Lindley-French, *The North Atlantic Treaty Organisation – An Enduring Alliance* (Abingdon, UK: Routledge, 2007), 36-38.

[9] John L. Romjue, *From Active Defense to Airland Battle: The Development of Army Doctrine 1973-1982* (Fort Monroe, VA: Historical Office United States Army Training and Doctrine Command, 1984), 1.

Soviet Union's advance across Europe until nuclear weapons could be employed. Active

Defense came under extensive criticism, particularly in Europe. The principal concept of Active

Defense was that NATO would conduct a fighting withdrawal across Western Europe. The

assertion of the doctrine was that defence was the stronger form of war, but it handed the

initiative to the Soviet Union who had technological and numerical superiority. Although the

eminent military theorist Carl von Clausewitz would have tended to agree that defence was the

stronger form of war, the German public in 1976 would have taken issue with their countryman

over any concept that allowed the defenders (US) to retreat whilst vaporizing the enemy on wide

swathes of German land.[10]

The principal charge by the European community was that the US was leaving the

Western European and NATO nations to fall to a Russian invasion, whilst the US protected

mainland America.[11] This tension within the relationship brought into question the motives of

the US: was the US working with NATO or was it merely using NATO as a vehicle of

convenience to rebuild its prestige? The answer is somewhat an element of both. The US

needed a stable Europe to counter the threat from the Soviet Union. Anti-Communist paranoia

was still prevalent within the US, and the maintenance of large-scale forces within Europe

enabled the United States to achieve its strategic ends. But, whilst the US, with its

---

[10] Carl von Clausewitz, *On War,* ed. and trans. Michael Howard and Peter Paret (Princeton: Princeton University Press, 1976; reprint ed., New York: Everyman's Library, Alfred A. Knopf, Random House, 1993), 427-606.

[11] Lindley-French, *The North Atlantic Treaty Organisation*, 43.

overwhelming military capability reinforced NATO, it did not necessarily achieve its strategy by contributing directly to the development of the alliance.[12]

If the Active Defense doctrine sent unintended mixed messages to Europe regarding the US' long-term commitment to NATO, the intellectual investment and the organizational transformation of the US military set the conditions for a new phase of the Cold War, and drove NATO to the apogee of its military capability in the mid-1980s.[13] Europe and the ideological battle with the Soviet Union had become the principal focus for US strategy, and the development of an effective NATO military capability to counter the Soviet threat was paramount to the US.

The criticism of the Active Defense doctrine was largely redressed with the development of the AirLand Battle doctrine. The AirLand Battle doctrine was developed by General DuPuy's successor at TRADOC, General Donald A. Starry, who took the principles of Active Defense and developed a combined arms doctrine that took a more offensive approach to defeating the Soviet threat. Rather than conducting a fighting withdrawal through Europe, AirLand Battle emphasized close coordination between the Army and Air Force to produce an integrated attack plan. The doctrine would not only stop the first wave of assaults, but would serve to slow the

---

[12] Between 1970 and 1980 the United States forces deployed within Europe were maintained a consistent level of 255,000 – 295,000. The troop build-up reached a peak of 321,000 at the height of the Cold War in 1984: Tim Kane, "Global US Troop Deployment, 1950-2003," and Seth Offenbach, "The Other Side of Vietnam: The Conservative Movement and the Vietnam War," ProQuest Dissertations & Theses(PQDT) October 2010, http://ezproxy6.ndu.edu/login?url=http://search.proquest.com/docview/857640022?accountid=12686 (accessed October 11, 2011).

[13] Henry Kissinger, *Does America Need a Foreign Policy? Towards a Diplomacy for the 21st Century* (New York: Simon & Schuster, 2001), 1.

movement of the Soviet/Warsaw Pact reserves toward the front line, thereby, retarding their momentum and making them vulnerable to Allied air and rocket attack.[14]

Although addressing some of the major concerns with Active Defense, AirLand Battle created further tension within NATO. Rather than taking a defensive posture, AirLand Battle took an overtly offensive posture, bringing into question the defensive foundation of NATO. There were also concerns within Europe that the AirLand Battle concept would not integrate with NATO doctrine, and that the US was creating a national strategy rather than a doctrine that would allow the US military and NATO to fight together coherently.[15] Ultimately, elements of AirLand Battle were integrated into NATO doctrine, including the principle of the operational level of war. Nevertheless, NATO's European nations did not necessarily agree with all the US initiatives, with many of the initiatives drawing criticism from within Europe. The European Allies were critical of the ready use of nuclear and chemical weapons, as well as cross border operations and the attack of follow-on forces.[16] Nevertheless, the US intellectual investment in developing a strategy to defeat the Soviet forces in Europe combined with the maintenance of the US force levels, sustained NATO as a constant deterrent to the Soviet threat.[17]

NATO remained a significant factor in the balance of power between the US and the Warsaw Pact. During the late 1970s and 1980s, the US developed the Dual Track strategy of combining diplomacy with the deployment of increased numbers of conventional troops and

---

[14] Romjue, *From Active Defense to AirLand Battle*, 51-73, and US Department of the Army, *Pamphlet 525-5, Military Operations: Operational Concepts for the Air-Land Battle and Corps Operations* (Suffolk, Virginia: TRADOC, March 1981), 1-10.

[15] General William Richardson, "FM 100-5: The Airland Battle in 1986." *Military Review* 77, no. 1 (March 1986): 174-177.

[16] Ibid.

[17] AirLand Battle doctrine drove significant technical enhancements to the US military, including the PATRIOT air defence system, ABRAMS Tanks, Bradley Infantry Fighting Vehicles, ATACMS missile systems and the APACHE attack helicopters, all of which were procured under the increases in Defense budget under President Carter and Reagan and endure today as a critical part of the US military inventory. Romjue, *From Active Defense to AirLand Battle*, 7.

nuclear missiles to mainland Europe.[18] This strategy ultimately contributed to the end of the

Cold War, as the Soviet economy could no longer sustain the military power struggle and began

to collapse with the fall of the Berlin Wall in 1989.[19]

NATO had proven itself essential to the security of Europe during the Cold War and had

presided over a period of unprecedented peace in Europe. The consistency in US military policy

had been central to NATO success; however, the relationship between the Alliance members

throughout this period was not always smooth. The main criticism of the US from within Europe

centred on the argument that NATO was merely a pawn in a bipolar game of chess.[20]

Ultimately, the West and NATO prevailed, yet at the height of its greatest victory, NATO's very

existence was in question. With the removal of the existential threat from the Warsaw Pact in

1989, what was the purpose of NATO?

NATO went through a period of strategic inertia in the wake of the collapse of the Soviet

Union. The destabilization in the wake of the collapse represented a crisis for NATO; did it

---

[18] President Reagan inherited the "Dual Track" strategy from President Carter, but took a hard line stance with the deployment of the Pershing II and cruise missiles nuclear weapons to Europe. Initially Reagan's hard line adaption of the Dual Track strategy actually exacerbated the depth of the Cold War and raised alarm within Europe that it may actually trigger nuclear war. The strategy did ultimately contribute to the Soviet collapse, but it was not decisive. For further information read Sterling J. Kernek, Kenneth W. Thompson, *Foreign Policy in the Reagan Presidency: Nine Intimate Perspectives* (Maryland: University Press of America, 1993,) 6.

[19] The contributing factors to the eventual collapse of the Soviet Union are complex and the missile race certainly contributed to the end of the Cold War, however, economic austerity, internal power struggles, failure to prevail in Afghanistan, and fragmentation of the Soviet satellite states contributed to the collapse of the system. For further information, read: Lawrence Freedman, *Europe Transformed: Documents on the End of the Cold War* (London: Tri-Service Press, 1990), 498-516. For further details on the details on the final arms control talks read, Jack Nelson and James Gerstenzang, "The Washington Summit. Gorbachev Focuses on Long-Range Missiles Arriving in Capital, He Challenges Reagan to Provide New Words on Reduction Proposals," Los Angeles Times, http://ezproxy6.ndu.edu/login?url=http://search.proquest.com/docview/292759921?accountid=12686 (accessed November 10, 2011).

[20] Not a direct quote and the view would not be consistent between all of the alliance nations. The most critical European nations were France who were constantly antagonistic towards the US presence in Europe but sat outside the NATO military council until they rejoined in 1994. George Grayson expresses the French view: George W. Grayson, *Strange Bedfellows-NATO Marches East* (Maryland: University Press of America, 1999), 24. A more positive view of the United States Strategy in Europe can be found in: Sarwar A Kashmeri, *NATO 2.0: Reboot or Delete* (Herndon, VA: Potomac Books, 2011), 49-67.

disband or evolve into a new form of military Alliance for a new Europe? After the Cold War, a

divergence in military policy across Europe led a number of nations to reduce their overall

military budgets, leaving the US as the overwhelming provider of military capability.[21] The

place of a hegemonic US within Europe was contentious and led to dissent within Europe.[22] In

this turbulent, post bipolar environment, the US Government's primary concern was whether

NATO presented a viable Alliance for future wars or whether it should consider large-scale

withdrawal from Europe.[23]

POST-COLD WAR NATO

Upon taking office in 1993, President Clinton faced a series of challenges and geo-

strategic shocks. During the Presidential campaign, the Clinton Administration focussed on a

domestic agenda, with the intent of moving away from the Reagan era of global power politics

and a large standing military.[24] The intent was not to revive isolationism, but to establish a

foreign policy based on expanding the influence of international organizations.

During the Presidential campaign, NATO was not specifically discussed, and it is not

clear whether the Clinton Administration had a clear NATO policy upon arriving in office.[25]

With the removal of the direct Soviet threat, the US domestic debate concentrated immediately

on the stagnant economy and how quickly the military could be reduced in size. In real terms

military spending declined (see Figure 1) and the actual size of the US military fell considerably.

From 1989 to 1999, the Armed Forces of the US reduced from 2.1 million personnel to 1.3

---

[21] Lindley-French, *The North Atlantic Treaty Organisation*, 43.

[22] Grayson, *Strange Bedfellows*, 24.

[23] Ibid., xxvii.

[24] Ibid., 68.

[25] Ibid., 69.

million and the Army went from 769,000 soldiers to 479,000.[26] The Clinton Administration

aspired to shrug off the negative militaristic connotations of the Reagan administration and

establish a strong de-Americanized Europe. With the demise of the Soviet Union, NATO

appeared to be an anachronistic organisation that was in desperate need of reform. The scene was

set for an American withdrawal.

   The French government was particularly outspoken in their criticism of the US' pre-

eminence within Europe, and led the call for European Security reform and the establishment of

a European defence identity.[27] The European nations appeared to be demanding a greater

influence within NATO, if not a major withdrawal of US troops from the Continent. The

balance of power within NATO appeared to be shifting to Europe. Yet, the Western European

nations could not follow through with their pledge for greater autonomy. After initially

demanding a greater leadership role within NATO, they became focussed on the Maastricht

Treaty and the advent of European Monetary Union.[28] The Western European nations became

introspective and rather than taking greater control of NATO, handed the US administration the

geo-strategic lead.

   In this shifting environment, the Clinton Administration identified that NATO could play

a significant role in assisting the stabilization of Central and Eastern Europe and assist nations in

the region in establishing representative governance after years of authoritarian communist

---

[26] James M. Cypher, "Military Spending after the Cold War," *Journal of Economic Issues* Vol. 25, No. 2 (June 1991): 607-615.

[27] Grayson, *Strange Bedfellows,* 24.

[28] The Maastricht Treaty established the European Union by bringing together the European Atomic Agency, the European Coal and Steel Community and the European Economic Community. The Treaty created economic and monetary union, and established cooperation in the fields of foreign policy and defense policy and increased the powers of the European Parliament. For more details, read Anon, "Treaty establishing the European Economic Community, EEC Treaty," Europa, http://europa.eu/legislation_summaries/institutional_affairs/treaties/treaties_eec_en.htm (accessed January 24, 2012).

rule.[29] The US Government was aware that it did not want to get involved in a series of regional disputes that would be domestically unpopular, and stretch a military that was in the process of reducing in size. The Clinton Administration focussed instead on maintaining its consistent humanitarian strategy of enlarging the number of market democracies by providing aid, nurturing democracy, and encouraging market economies.[30]

The new foreign policy was problematic for NATO because it did not give a clear indication of the US' long-term intent towards the alliance, but hinted at a more disengaged role. National Security Advisor, Tony Lake, stated, "Unless NATO is willing over time to assume a broader role, then it will lose public support, and all nations will lose a vital bond of transatlantic and European security."[31] The decision on how NATO should evolve was discussed at a NATO summit in Brussels in January 1994, during which the US administration highlighted a number of options available to NATO that would help it develop its response to the emerging international environment.

The Clinton Administration identified that by offering NATO membership to former members of the Soviet Union; it could accelerate the momentum for political and economic liberalization and enhance collective regional security. To become full members, the applicants would need to take significant steps in democratizing their states and opening their economies. Poland, Hungary and the Czech Republic were the first nations to take up the offer of membership. This process arguably prevented the resurgent communist movements within their respective nations from regaining power in the political turmoil of the early 1990s.[32]

---

[29] Grayson, *Strange Bedfellows,* 25.

[30] Lindley-French, *The North Atlantic Treaty Organisation*, 65.

[31] Anthony Lake, "From Containment to Enlargement," *US Department of State Dispatch 4*, no. 39 (September 1993): 658.

[32] Grayson, *Strange Bedfellows*, 155-184.

Whilst NATO and Europe were coming to terms with their own future, the aftershocks of the collapse of the Soviet Union were being felt across Europe. In the wake of the defunct Soviet superpower, Eastern and Central Europe became an inherently unstable region. The removal of the controlling Soviet authority had allowed the cultural, ideological and geographical disputes, which had been suppressed during the Soviet era, to re-emerge and cause instability, particularly in the Balkans.

The debate was brought to crisis point by the intransigence of the European community to intervene effectively in Bosnia. The crisis in Bosnia between the ethnic Serbs, Croats and Bosnian Muslim population began in 1992, but reached crisis point by 1995.[33] The European community viewed the situation as a civil war; however, the US was concerned that the Bosnian crisis could overflow to other nations in the relatively unstable Eastern Europe. The crisis point for the community came with the realisation of the atrocities being conducted in Bosnia and the failure of the United Nations (UN) and Europe to act decisively in its own region. The failure of the European community and NATO to react to the massacre in Srebrenica demonstrated a lack of political will and, significantly, an inability on the part of Europe to carry out a large scale, coordinated military operation without assistance.[34]

The Clinton Administration demonstrated the decisiveness of a realistic hegemonic power. It took decisive leadership within the region to act when the crisis in the Balkans threatened regional stability, something the European nations did not do. The US determined the

---

[33] For an examination of the interrelationship between the rival factions within Bosnia, read: Samuel P Huntington, *The Clash of Civilizations and the Remaking of World Order (*New York, Simon and Schuster, 1996), 38, 125-127 and 261-262.

[34] The Srebrenica massacre refers to the July 1995 killing, during the Bosnian War, of more than 8,000 Bosnian Muslims, mainly men and boys, in and around the town of Srebrenica in Bosnia and Herzegovina, by units of the Army of Republika Srpska (VRS) under the command of General Ratko Mladić. Patricia Wald, "General Radislav Krstic: A War Crimes Case Study," *The Georgetown Journal of Legal Ethics* 16, no. 3 (March 2003): 445-72.

course of action that NATO took and dictated the requirement to escalate the conflict by advocating the systematic bombing of Serbian targets. National Security Advisor, Tony Lake, stated to NATO counterparts in July 1995, "The President of the US has decided that we are going to pursue this policy and we would certainly like you to be part of it, but we are going to proceed without your help if necessary." This statement exposed the weakness of the European nations and NATO's inability to react without overwhelming US leadership.[35]

Although the argument could be construed that the US ran roughshod over the NATO and European decision-making process, the realty was that the Balkans crisis was new ground for Europe and the alliance, and marked a change in the focus of NATO. An alliance that was meandering through expansion and political turmoil needed strong American leadership to push it into conducting its first "hot" war. NATO was led into conflict by its foremost power. The US enhanced the durability of the alliance through the shared experience and by challenging NATO's core reason for existing: the security of Europe.[36]

The period of NATO expansion needed to be reinforced with the credibility of military force. The US had considered stepping away from Europe, but found it needed to exert its hegemonic power during the 1990s and early 21st century to ensure that NATO remained a cohesive and effective military capability. It could not afford to reduce its commitment to Europe without a guarantee that the region was stable. The Balkans experience set the tone for NATO's interventionist role in Kosovo and ultimately led to the out of area action in Afghanistan and Libya.

---

[35] Gregory Miller, *No Exit: The Politics of NATO's Perseverance: A Study of Alliance Durability* (Charlottesville, VA: University of Virginia, 2009), 107.

[36] Ibid., 108.

While NATO has evolved since its creation in 1949, the US Government has maintained a consistent policy of supporting NATO. The US must now determine what level of commitment it provides to Europe to meet the challenges of the 21st Century. Can the US still afford to support Europe or is it time to let NATO operate without overwhelming support of US military power? To establish a roadmap for the transition from the Cold War paradigm of collective defence and frame the NATO vision for the future, NATO is implementing its new Strategic Concept.

INTO THE NEXT STAGE OF NATO'S EVOLUTION

FUTURE WARS FOR NATO

The international environment is inherently unpredictable, characterized by the continual interplay of human, ideological and resource factors that cannot be controlled or accurately predicted. The international environment will continue its transition from a uni-polar to a non-polar environment, marked by the reduction in the power of individual nation states and the increase in power of non-state actors.[37] NATO has a key part to play in this increasingly non-polar and inherently unstable world order.

To establish NATO's role within this transitioning world order and to provide clear direction for the future, the heads of state of the member nations laid out the new NATO Strategic Concept in Lisbon in 2010.[38] Promulgating the Strategic Concept is a key step for NATO. NATO evolved from the Cold War paradigm of deterrence and transitioned through the challenges of an unstable Central and Eastern Europe to emerge as an organisation looking

---

[37] Richard N. Haass, "The Age of Non-Polarity: What will follow US Dominance," *Foreign Affairs,* May/June 2008 (June 2008):1-7, http://www.foreignaffairs.com/articles/63397/richard-n-haass/the-age-of-nonpolarity (accessed February 4, 2012).

[38] Secretary General of NATO, *Strategic Concept: For the Defence and Security of The Members of the North Atlantic Treaty Organisation (*Brussels: NATO Public Diplomacy Division, 2010), 1.

towards its future state. Although Europe remains largely stable, the borders of the Continent now no longer necessarily bound the threats to European stability.[39] NATO has responded to the post September 11, 2001 world by defining its role as an Alliance that can project stability beyond Europe.

The US played a pivotal political and military role in transforming NATO from a Cold War anachronism to a relevant modern organisation. NATO's increased political influence in Eastern Europe and its support for operations in the Balkans and Afghanistan established NATO legitimacy and created a broad remit that took NATO out of Europe. Article 5 was invoked for the only time in support of the US-led Afghanistan operation, but it was the Prague Summit in November 2002 that established the out of area role for NATO.[40] This role occurred principally in response to US demands that NATO transform itself in order to counter the existential terrorist threat after the September 11, 2001, terrorist attacks.[41]

The synthesis of these factors required the role of NATO to be redefined, and the New Strategic Concept articulated three main tasks:

> **Collective Defence.** NATO members will always assist each other against attack, in accordance with Article 5 of the Washington Treaty. That commitment remains firm and binding. NATO will deter and defend against any threat of aggression, and against emerging security challenges where they threaten the fundamental security of individual Allies or the Alliance as a whole.

---

[39] Rebecca R. Moore, *NATO's New Mission: Projecting Stability in a Post Cold War World* (Westport, CT: Praeger, 2007), 142.

[40] Article 5 is at the basis of a fundamental principle of the North Atlantic Treaty Organisation. It provides that if a NATO Ally is the victim of an armed attack, each and every other member of the Alliance will consider this act of violence as an armed attack against all members and will take the actions it deems necessary to assist the Ally attacked. This is the principle of collective defence. *NATO Handbook*, 372.

[41] Heads of State of Government of the North Atlantic Council, "Prague Summit Declaration," NATO Website, http://www.nato.int/docu/pr/2002/p02-127e.htm (accessed October 29, 2011).

Crisis Management. NATO has a unique and robust set of political and military capabilities to address the full spectrum of crises–before, during and after conflicts. NATO will actively employ an appropriate mix of those political and military tools to help manage developing crises that have the potential to affect Alliance security, before they escalate into conflicts; to stop on-going conflicts where they affect Alliance security; and to help consolidate stability in post-conflict situations where that contributes to Euro-Atlantic security.

Cooperative Security. The Alliance is affected by, and can affect, political and security developments beyond its borders. The Alliance will engage actively to enhance international security, through partnership with relevant countries and other international organisations by contributing actively to arms control, nonproliferation and disarmament; and by keeping the door to membership in the Alliance open to all European democracies that meet NATO's standards.[42]

Although the foundation and core functions of the old NATO remain through the collective security and defence of Europe, the role of crisis management and political advocacy beyond European borders expands NATO's sphere of influence. To attempt to predict accurately how and where NATO will be needed to perform its new roles is challenging; as eminent military historian, Sir Michael Howard, states, ''No matter how clearly one thinks, it is impossible to anticipate precisely the character of future conflict. The key is to not be so far off the mark that it becomes impossible to adjust once that character is revealed.''[43]

One of the biggest challenges facing sovereign nations is that their limited means restricts their ability to make unilateral decisions to go to war for offensive and defensive purposes. NATO has become a preeminent factor in Trans-Atlantic policy through necessity and requirement. The broad role that the new NATO Strategic Concept outlines will be extremely challenging to accomplish and will require the participation and commitment of all member nations to succeed.

---

[42] Secretary General of NATO, *Strategic Concept,* 3.

[43] Sir Michael Howard, "Military Science in an Age of Peace," *Royal United Services Institute,* Vol 119, No 1 (March 1974), 7.

The first opportunity to put the new Strategic Concept into action occurred in early 2011. With the uprising in Libya and Colonel Gaddafi's violent oppression of his population, NATO, in support of the UN mandate, decided to intervene and use military force to resolve the crisis. An assessment of NATO's performance in Libya should establish whether NATO achieved the goals stipulated in the Strategic Concept. The analysis will also determine whether the European nations are ready to take on greater responsibility for NATO, or if the US is still required to provide the overwhelming support to NATO operations.

CHAPTER III

LIBYA: AN UNLIKELY ALLIANCE

On March 19, 2011, a coalition of the United States (US), United Kingdom (UK) and French Air Forces, operating under United Nations (UN) Security Council Resolution (UNSCR) 1973, began an air and maritime operation to protect Libyan citizens from attack by the forces loyal to Colonel Muammar Gaddafi. The UN resolution directed the establishment of a "no fly zone and a maritime embargo operation to protect Libyan citizens."[1] This commitment was part of a broad coalition, principally led by the UK, France and other key NATO allies, and would incorporate support from members of the Arab League.[2]

From the beginning of the Libyan crisis, the US determined that it was not going to take overt leadership of the military operation. Previous operations, particularly Bosnia, Kosovo and Afghanistan, were principally led by the US, and with the majority of NATO forces supplied by the US.[3] The overwhelming leadership of the US military was the defining factor in the success of these conflicts. However, at the outset of the Libyan operation, President Obama stated that "The US will not put ground troops into Libya . . . it will focus our unique capabilities on the front end of the operation . . . and will transfer responsibility to our allies and partners."[4] The operation was a watershed for NATO; for the first time NATO would conduct a significant combat operation without overriding US participation. Therefore, the Libyan operation offered

---

[1] United Nations Security Council, "UNSCR1973," UN.org, http://www.un.org/News/Press/docs/2011/sc10187.doc.htm (accessed October 28, 2011).

[2] Qatar, Jordan and UAE contributed forces facilitated principally by Tunisia. Dr Jonathan Eyal, "Accidental Heroes: Britain, France and the Libya Operations," *Royal United Services Institute*, An Interim RUSI Campaign Report (September 2011), 1.

[3] Ibid., 4.

[4] President of the United States, "Obama's Remarks on Libya," NY Times.com, http://www.nytimes.com/2011/03/29/us/politics/29prexy-text.html?pagewanted=2&_r=1&ref=africa (accessed September 25, 2011).

the European NATO nations an opportunity to demonstrate that they were capable of managing a complex emerging crisis, something they had singularly failed to achieve in the Balkans. The inherent risk was that the European nations would struggle to conduct the operation without the US military expertise and capability.[5]

This chapter will assess the background to the political decisions made before the conflict and analyse the military performance of NATO during the operation. The analysis will determine whether NATO achieved the intent of their new Strategic Concept and identify any shortfalls in capability. The chapter will conclude by identifying key areas where the US should invest in NATO to enhance its readiness for future operations.

THE PATHWAY TO WAR – NATO AND LIBYA

The events in North Africa and the Middle East, referred to as the Arab Spring or The Awakening, preceded the Libyan crisis in late 2010 and early 2011.[6] The origin of the Arab Spring began in December 2010 in Tunisia. The protest by an unemployed street vendor against police excess in Tunis acted as a catalyst for a series of events that eventually led to the downfall of the Tunisian government. This spark of protest emanating from Tunisia rapidly spread to Egypt, Bahrain, Syria and Yemen over the following weeks.[7] The Western perception of the crisis was one of popular protest and national demonstrations against dictatorial leaders. This view was formed through extensive conventional and social media coverage, the reality was that the detail of each

[5] Tim Ripley, "Counting the Cost - Lessons of Libya for European Defence Policy," *Janes Intelligence Review*, 23(6) (June 9, 2011): 18-22.

[6] Anon, "It can still come right; the Arab awakening, six months on," *The Economist*, July 16, 2011) under "The Arab Awakening," http://www.economist.com/node/18958377 (accessed September 12, 2011)., also read Augustus Richard Norton and Ashraf El-Sherif, "North Africa's Epochal Year of Freedom," *Current History*, Vol 110, Issue 736 (May 2011): 201-205.

[7] Gary Blight, Sheila Pulman and Paul Torpey, "The Arab Spring an Interactive Timeline," The Guardian Online, http://www.guardian.co.uk/world/interactive/2011/mar/22/middle-east-protest-interactive-timeline (accessed November 1, 2011).

nation's experience was highly complex and each nation's protest had its own dynamic and multi-faceted political and social background. The Libyan crisis was no exception.[8]

Colonel Muammar Gaddafi had come to power in 1969 as part of a military coup. He remained the Libyan Head of State, known as The Brother Leader and Guide of the Revolution through the subsequent 42 years, imposing his own religious and socialist ideologies through his "green book" doctrine. His foreign policy had regularly brought him into conflict with the West, primarily through his overt support of terrorism and his domestic nuclear programme, but in recent years important steps had been taken to re-establish formal diplomatic ties with the UK and US.[9] With the nation's new found ingratiation with the West, the speed of change and volatility within Libya took the international community by surprise.

Protests against Gaddafi's regime began in Benghazi, in the east of the country, in February 2011 and rapidly spread to the rest of the nation as the population anticipated the end of Gaddafi's authoritarian regime. When Gaddafi vowed on February 22, 2011, to "crush the revolt," the UN reacted by generating UNSCR 1970 on February 26, 2011.[10] UNSCR 1970 provided justification for humanitarian assistance to the Libyan population, and enabled nations to conduct Non-Combatant Evacuation Operations (NEO) of their citizens from within Libya. The UN resolution also expressed its

---

[8] Norton and El-Sherif, "North Africa's Epochal Year of Freedom," 201-205.

[9] US Department of State, "Background Note: Libya," State.gov, http://www.state.gov/r/pa/ei/bgn/5425.htm (accessed November 20, 2011).

[10] Anon, "Lessons for Libya," *Financial Times*, March 19, 2011, 8.

readiness to consider taking additional appropriate measures to ensure the security of the Libyan civilian population.[11]

The US Secretary of Defense immediately directed US Africa Command (USAFRICOM) to begin planning for the evacuation of American citizens from Libya.[12] The NEO was successful; however, Gaddafi's military continued to use force to crush the revolt. Within Libya, on February 27, 2011, the opposition announced the formation of a Transitional National Council (TNC) based in Benghazi. The TNC stated its desire to remove Gaddafi from power and establish a unified, democratic and free Libya that would respect universal principles of human rights.[13]

The threat of escalating violence and the coalescing of a viable alternative to the Gaddafi regime prompted the Arab League to approach the UN Assembly in New York on March 12, 2011, to request further action to protect the Libyan population.[14] The Arab League stated their desire to establish an Embargo Operation and a No Fly Zone (NFZ) to curtail the use of Libyan air power on civilians.[15] The UN responded by issuing UNSCR 1973 on March 17, 2011.

UNSCR 1973 provided the formal authorization for the use of force over Libya and demanded an immediate cease-fire by Gaddafi's forces. The resolution also authorized the establishment of a NFZ, enforcement of the arms embargo delineated in UNSCR 1970, and all

---

[11]United Nations Security Council. "UNSCR 1970," UN.org, http://www.un.org/News/Press/docs/2011/sc10187.doc.htm (accessed Nov ember 1, 2011).

[12] United States Joint Chiefs of Staff, Joint and Coalition Operational Analysis, *Libya: Operation ODYSSEY DAWN (OOD). A Case Study in Command and Control (Oct 11)* (Suffolk, Virginia: Joint Chiefs of Staff, October 2011): 1.

[13] United States Department of State, "Background Note: Libya," State.gov, http://www.state.gov/r/pa/ei/bgn/5425.htm (accessed December 27, 2011).

[14]Sarah El Deeb, "Arab League Asks UN For Libya No-Fly Zone," *Huffington Post,* March 12, 2011, under "Arab League support for Libya," http://www.huffingtonpost.com/2011/03/12/arab-league-asks-un-for-libya-no-fly-zone_n_834975.html (accessed November 21, 2011).

[15]Anon, "Arab League Backs Libyan No-Fly Zone," BBC Online, http://www.bbc.co.uk/news/world-africa-12723554 (accessed October 30, 2011).

necessary measures, short of foreign occupation, to protect civilians and civilian populated areas threatened by attack.[16]

The resolution incorporated the requests of Tunisia, a key participant in the NATO Mediterranean Dialogue (MD) and a nation also going through its own Arab Spring experience.[17] Tunisians were principally concerned with the security of their eastern border and maintaining domestic security. Leveraging its experience from working with NATO, Tunisia ensured that Jordanian, Egyptian, Qatari and United Arab Emirates forces were integrated into the NATO dominated coalition. These actors provided Arab legitimacy to what otherwise might have been characterised as an Infidel attack.[18] This broad support for the operation was particularly important for Turkey, a large Muslim nation and a significant member of NATO. The Arab representation enabled Turkey to contribute to the military operations in Libya without compromising their religious affiliations. The Arab participation also ensured that the Libyan coalition represented a broad contribution of forces from the West and Middle East. The extensive international support established legitimacy and mitigated concerns in the West that intervention in Libya would represent another anti-Muslim *clash of civilizations*.[19]

The Obama Administration was particularly careful to not antagonize the Muslim world. The US did not want to become involved in a potentially complicated and unsustainable third enduring operation. The Administration was not initially enthusiastic about supporting a military

---

[16] United Nations Security Council, "UNSCR1973."

[17] The Mediterranean Dialogue (MD) was established in 1994 and reflects NATO's view that security in Europe is closely linked to security and stability in the Mediterranean. It is an integral part of NATO's adaptation to the post-Cold War security environment as well as an important component of the Alliance's policy of outreach and cooperation. The nations in the MD include Algeria, Egypt, Israel, Jordan, Mauritania, Morocco and Tunisia. NATO, "NATO Mediterranean Dialogue," NATO Website, NATO Live, http://www.nato.int/cps/en/SID-9077D7FF-1A7142EA/natolive/topics_60021.htm? (accessed February 5, 2012).

[18] Eyal, "Accidental Heroes," 3.

[19] The theory of the clash of civilizations is articulated by Huntington, *The Clash of Civilizations and the Remaking of World Order,* 174-179.

intervention in Libya, but equally the State Department was aware that it did not want to preside over a potential humanitarian disaster.[20] The end-state of furthering national strategy, and removing a problematic dictator who had few allies, was a key strategic decision. The challenge for the Obama Administration was balancing the risk of failure, and over-committing forces in an unpopular war, against the potential strategic rewards. Ultimately, the Arab League's request to the UN for intervention, and the broad coalition of states who supported the operation tipped the balance in favour of military support and provided the legitimacy that the US leadership needed. President Obama's main caveat in authorising operations in Libya was that the US would take a limited military role, but would support European leadership of the crisis.

The Libyan crisis offered the European Union (EU) an opportunity to demonstrate effective regional leadership. However, the EU was unable to achieve an effective political consensus on how to respond to the Libyan crisis. This failure to achieve an effective consensus demonstrated the same lack of decisiveness that contributed to the escalation of the Balkans crisis in the 1990s, and undermines the current strategic intent of the EU to establish a Common Security and Defence Policy (CSDP).[21] The Berlin-Plus Agreement, ratified in March 2003, had enabled the EU to exploit the "commonality between the twenty-one European nations represented in both the EU and NATO," and allowed the EU to offer NATO first refusal of a military mission under EU political leadership and guidance.[22] This mechanism was a critical part of the intent for the EU to deliver a CSDP. However, the dense bureaucracy and inability of the EU to deliver a timely decision risked the Libyan crisis escalating before the world

[20] James Kitfield, "Obama: The Reluctant Warrior on Libya," *National Journal*, March 18, 2011under "Obama Libyan strategy,", http://www.nationaljournal.com/nationalsecurity/obama-the-reluctant-warrior-on-libya-20110319, (accessed November 21, 2011).

[21] Eyal, "Accidental Heroes," 1.

[22] NATO, 'Berlin Plus Agreement,' NATO Website, http://www.nato.int/shape/news/2003/shape_eu/se030822a.htm, (accessed October 28, 2011).

responded. The spectre of another Srebrenica was a real possibility. Images of fast jets in action against civilian targets in Libya filled the media coverage, yet the EU failed to act.

The failure of the E.U. to act decisively has contributed to an existential crisis regarding the viability of the CSDP. At a time when European unity was in turmoil due to the European Monetary Union debt crisis, the Libyan operation offered the perfect opportunity to regain unity and consensus in the E.U. and raise confidence in its leadership.[23] However, the E.U. failed and the UK and French governments were forced to form a bilateral political partnership; a partnership that was determined to exercise military power through NATO, with limited US involvement.[24]

The leadership by the UK and French Governments was unprecedented. The international community had expected the US to take control of the operation in Libya, as it had done in Bosnia, Kosovo and Afghanistan; however, the Obama Administration was content to take a strong supporting role, which was consistent with the "Obama doctrine." The US 2010 NSS and the Priorities for 21st Century Defense strategic guidance offer the vision of the "Obama Doctrine." The doctrine establishes the US as an international leader, but achieves this by taking a more considered and pragmatic role in shaping the international community, as opposed to the Bush Doctrine of preemptive attacks.[25] While the US' actions in Libya

---

[23] Portugal, Ireland, Italy, Greece and Spain were all close to default on their national debt, risking the cohesion of the Euro, placing strain on the European Monetary Union and possibly plunging Europe and the rest of the global economic system into crisis. A balanced review of the background to the crisis can be found by reading Geoffrey Underhill, "Paved with Good Intentions: Global Financial Integration and the Eurozone's Response," *European Political Science*: EPS 10, no. 3 (June 2011): 366-74.

[24] Benoit Gomis, "Franco-British Defence Cooperation after Libya," *Chatham House*, November 2, 2011 under "French and British cooperation," http://www.chathamhouse.org/media/comment/view/179253 (accessed November 21, 2011).

[25] President Obama's strategy is set out in US President, *National Security Strategy* (Washington D.C: Government Printing Office, May 2010), 1-7, and President Bush's strategy is set out in US President, *The National Security Strategy of the United States of America* (Washington D.C: Government Printing Office, March 2006): 49. The revised Obama Administration strategy is defined in US President, *Priorities for the 21st Century*, 1-3.

personified the goals of the Administration's doctrine, a number of US Senators and political commentators described the US approach of taking a strong supporting role to the Libyan crisis as taking a "backseat."[26]

The Obama Administration's view of internationalism pervades throughout the US decision-making. The US Administration observed an opportunity to empower Europe and NATO in a unique military operation against relatively limited armed forces and an unpopular leader. A strong effective NATO would strengthen the perception within the international community of NATO's ability to deter threats and counter instability in Europe and the immediate surrounding area. A strong NATO, which needed only limited US involvement, would further US long-term strategy to disengage from Europe and enable the US to consider withdrawing armed forces from Europe.

To achieve the US strategic objectives, the effectiveness of NATO would be essential, and for the strategy to be successful, NATO needed to work without an overwhelming US military capability. The US strategy was to allow the European nations to take an overt lead, but, equally, not to allow NATO to fail. Therefore, a subtle balance needed to be struck. The first test for NATO occurred on March 18, 2011, when, under intense international pressure, the North Atlantic Council was required to achieve consensus to support UNSCR 1973 and authorise a military intervention in Libya before the crisis escalated.

---

[26] Anon, "McCain decries 'backseat role' in Libya," UPI.com, http://www.upi.com/Top_News/US/2011/05/01/McCain-decries-backseat-role-in-Libya/UPI-33781304278241/ (accessed October 21, 2011).

Achieving consensus has been a cornerstone of the NATO decision-making process since 1949, but has always been controversial.[27] The NATO consensus process is extremely bureaucratic and requires all nations to participate in making decisions. Achieving agreement across a broad alliance can be, at best, challenging and, at worst, frustratingly unachievable. However, despite the obvious flaws with the system, namely that it can delay achieving significant decisions, the process negates individual national whims and political initiatives. In the case of Libya, although there were a number of abstentions, the members of the North Atlantic Council authorized a non Article V intervention in Libya within 24 hours.[28] NATO had passed its first test, the next and most challenging step for the alliance was to operate effectively without an overwhelming US military contribution.

In a televised statement on March 18, 2011, President Obama declared that the US and its allies would implement the provisions of UNSCR 1973.[29] The speed of response by the coalition ensured there would be no repeat of Srebrenica. By acting decisively, the coalition may have averted a humanitarian disaster in Libya that decision makers in Europe failed to avoid in the 1990s.

---

[27] The philosophy behind the NATO consensus rule permeates throughout all NATO doctrine. All NATO committees take decisions or formulate recommendations to higher authorities based on exchanges of information and consultations, leading to consensus. There is no voting or decision by majority. This ensures no one nation can wield power and influence over the Alliance. The downside to the process is that when faced with a crisis, the alliance may be unable to react due to a lack of consensus. North Atlantic Treaty Organization, *NATO Handbook*, 7. For a critical assessment of the consensus process read, Leo G. Michel, "NATO Decision-making: Au Revoir to the Consensus Rule?" *Strategic Forum*, 202, (August 2003):1-8.

[28] Germany was the most notable abstention. This was primarily due to national legislation that would have held up the decision process. Their abstention enabled NATO to achieve consensus, without undue delay. For more details read Richard Rousseau, "Why Germany Abstained on UN Resolution 1973 on Libya," *Foreign Policy Journal,* June 22, 2011, under "NATO abstentions for Libyan operations," http://www.foreignpolicyjournal.com/2011/06/22/why-germany-abstained-on-un-resolution-1973-on-libya/ (accessed November 21, 2011). The details of the NATO decision can be found at, Secretary General of NATO, "Statement by NATO Secretary General following the United Nations Security Council Resolution 1973 March 18, 2011," NATO website, http://www.nato.int/cps/en/natolive/71679.htm (accessed October 4, 2011).

[29] US President, "Remarks by the President on the Situation in Libya," Whitehouse.gov, http://www.whitehouse.gov/the-press-office/2011/03/18/remarks-president-situation-libya (accessed November 8, 2011).

THE FIRST DAYS OF WAR

The first phase of the military operation began on March 18, 2011, and was a US-led coalition operating as Joint Task Force ODYSSEY DAWN. The US and its principal Allies were aware of the need for a swift response to Gaddafi's aggression to avert a humanitarian disaster. The US, along with the French and British militaries, had forces at high readiness in Europe and Africa to react to the imminent threat and protect the Libyan civilian population. The intent was for the US-led coalition to suppress the immediate threat from Gaddafi's forces and then enable NATO to take on the command of the No Fly Zone and Maritime Embargo operation on March 25, 2011. NATO would then take full command of the operation from March 27, 2011.[30] Therefore, from the outset of the operation, as directed by the President, the US and coalition military commanders began working on plans to transfer command to NATO.[31]

The command and control of Joint Task Force ODYSSEY DAWN was complex. The US utilised its existing Geographic Combatant Command organisation to support the operation. USAFRICOM took the lead, but received support from US European Command (USEUCOM) due to the requirement to utilise forces from within Europe and also the need to integrate coalition partners. A statement by the USEUCOM Chief of Staff highlighted the complexity, "You have kinetic effects in one Geographic Component Command, generated out of another Geographic Combatant Command, partnered with a coalition, with resources from a third Geographic Combatant Command."[32] The complexity of the command relationships made the planning of the initial operation problematic.

---

[30] Secretary General of NATO, "Statement by NATO Secretary General Anders Fogh Rasmussen on Libya," NATO website, http://www.nato.int/cps/en/natolive/71679.htm (accessed October 21, 2011).

[31] Joint and Coalition Operational Analysis, *Libya: Operation ODYSSEY DAWN (OOD),* 7.

[32] USEUCOM Chief of Staff, Interview by JCOA, April 12, 2011. From, Joint and Coalition Operational Analysis. *Libya: Operation ODYSSEY DAWN (OOD)*, 4.

For the US planners in USAFRICOM and USEUCOM, the attainment of defined end-states was constrained by the political intent to hand over command at the earliest opportunity. The strategic end-state set by the US President focussed on transitioning the operation to NATO leadership, rather than providing clear end-states and termination criteria for planners to adhere. General Carter Ham, AFRICOM Commander, stated, "Our role currently . . . under my authority as the commander, is to make sure of two things, first, that we continue exercising our . . . mission that we have, protect civilians, and secondly, that we are prepared to transition responsibility for the mission to NATO quickly, effectively, and without disruption of the on-going mission."[33]

The US planners in USEUCOM and USAFRICOM were highly trained and effective personnel who were experienced in planning at the operational level.[34] When faced with the constraints imposed by US national strategy they were not able to apply this knowledge.[35] A statement from US planners at USAFRICOM highlights the issue, "There was no clear guidance from higher authority. We had to use the USAFRICOM Mission Statement for guidance; it is tough and frustrating to plan an operation with no *why* [emphasis added], you cannot assess how you are doing without knowing the end state."[36]

The operational environment was further complicated by the restraints imposed on the coalition forces. NATO's maritime embargo was in position immediately, but due to political

---

[33] Ibid., 8.

[34] Ibid., 5.

[35] Ibid., 5. Details of US doctrinal Operational Design execution can be read in: US Joint Chiefs of Staff, *Joint Publication 5-0: Joint Operation Planning (*Washington: Joint Chiefs of Staff, August 11, 2011)*, III-1 – III-46.

[36] JTF-OD J5/Future Plans Officer, interview by JCOA, April 18, 2011, from Joint and Coalition Operational Analysis. *Libya: Operation ODYSSEY DAWN (OOD).* 8.

restraints, no conventional Coalition forces were deployed on the ground.[37] Gaddafi's forces

consisted of loyal elements of his professional military and police forces. However, the

emerging rebel forces, supporting the TNC and fighting Gaddafi's forces, were disorganised with

limited equipment and communications capability. Although Coalition Special Forces were

helping the rebels organise their resistance on the ground, there was limited ability to coordinate

the ground and air efforts.[38] In this environment the Allied commander's actions were limited to

the use of precision air power to shape the operational environment for a rebel force over which

they had no control, in the vain hope that the rebel forces would be able to take advantage of the

effects on Gaddafi's forces.

The lack of clear strategic end-states and operational design resulted in the planning of

Operation ODYSSEY DAWN being limited to a series of kinetic military actions. The lack of

clear strategic guidance should not have been too much of a surprise for senior commanders, as it

is difficult to identify an operation in living memory where the military and political end-states at

the beginning and end of an operation were adequately defined and coherent. Experience from

Bosnia, Kosovo, Iraq and Afghanistan have proven that military commanders must work with an

ambiguous political end-state and must interpret and adapt to changing strategic direction.[39] The

---

[37] Sergio Cantone, "Rasmussen says no ground troops for Libya," Euronews Online, http://www.euronews.net/2011/03/28/rasmussen-says-no-nato-ground-troops-for-libya/ (accessed November 1, 2011).

[38] Eyal, "Accidental Heroes," 8.

[39] The analysis of the effectiveness of military end states is examined thoroughly by Fred Charles Ikle, *Every War Must End* (New York: Columbia University Press, 1971, reissued 2005), 108. His principle argument is that governments struggle to define effective end states and then extricate themselves from conflict. Martin A. Smith, "Afghanistan in context: NATO out-of-area debates in the 1990s," *UNISCI Discussion Papers,* (22), (January 2010):16-32 describes the challenges to establish agreed NATO end-states in Bosnia, Kosovo and Afghanistan whilst General Wesley K. Clark, *Waging Modern War* (Cambridge, MA: The Perseus Group, 2001), 77-107 provides a personal perspective on the challenges of directing operations during the Balkans conflict with shifting end-states. Bob Woodward, *State of Denial* (New York: Simon and Schuster, 2006), 103-113 and 116-119 and Bob Woodward, *Bush at War* (New York: Simon and Schuster, 2002) 93-110 provides an insight into the challenges for the Bush Administration establishing end-states prior to the commencement of the wars in Afghanistan in 2001 and Iraq in 2003.

Joint Task Force ODYSSEY DAWN commanders undoubtedly struggled with the lack of clear strategic direction. Their inability to translate the strategic direction into a coherent plan with a robust operational design would be critical as they handed over command to NATO.[40]

At the point of the handover of command on March 27, 2011, the US led mission had achieved its limited end-state of protecting the Libyan civilian population, setting the conditions for a No-Fly Zone, and maintaining a naval embargo operation. However, it had not set the conditions for NATO to win the war.[41] Although Operation ODYSSEY DAWN had degraded Gaddafi's military with a high degree of accuracy and limited collateral damage, the coalition critically lacked a coherent plan that NATO could continue to pursue to a desired operational end-state. The US forces had shaped the environment, but a new team of commanders and planners would need to take on the responsibility to direct operations that were already underway.

When NATO took command of the operation, rebel forces had been making advances against the pro-Gaddafi units in central Libya (see Figure 2). Rebel forces had made advances to Surt, but their ability to defend the advance was fragile and the pro-Gaddafi units were threatening to counterattack against the rebel-held towns of Misrata, Brega and Ajdabiya.[42] NATO needed to ensure that it maintained the status quo and did not hand the operational initiative to pro-Gaddafi forces.

---

[40] U.S Joint Publication 5-0 describes operational design as the "Planners apply operational design to provide the conceptual framework that will underpin joint operation or campaign plans and their subsequent execution," from: US Joint Chiefs of Staff, *Joint Publication 5-0*, x.

[41] Joint and Coalition Operational Analysis, *Libya: Operation ODYSSEY DAWN (OOD),* 12.

[42] CNN Wire Staff, "Leaders call for more NATO strikes as Gadhafi forces pummel Misrata," CNN Online*,* http://articles.cnn.com/2011-04-12/world/libya.war_1_civilians-gadhafi-forces-airstrikes?_s=PM:WORLD (accessed November 1, 2011). CNN Wire Staff, 'Overwhelmed rebel fighters flee from eastern Libyan city," CNN Online,http://articles.cnn.com/2011-04-07/world/libya.war_1_nato-aircraft-rebel-fighters-gadhafi?_s=PM:WORLD (accessed November 1, 2011).
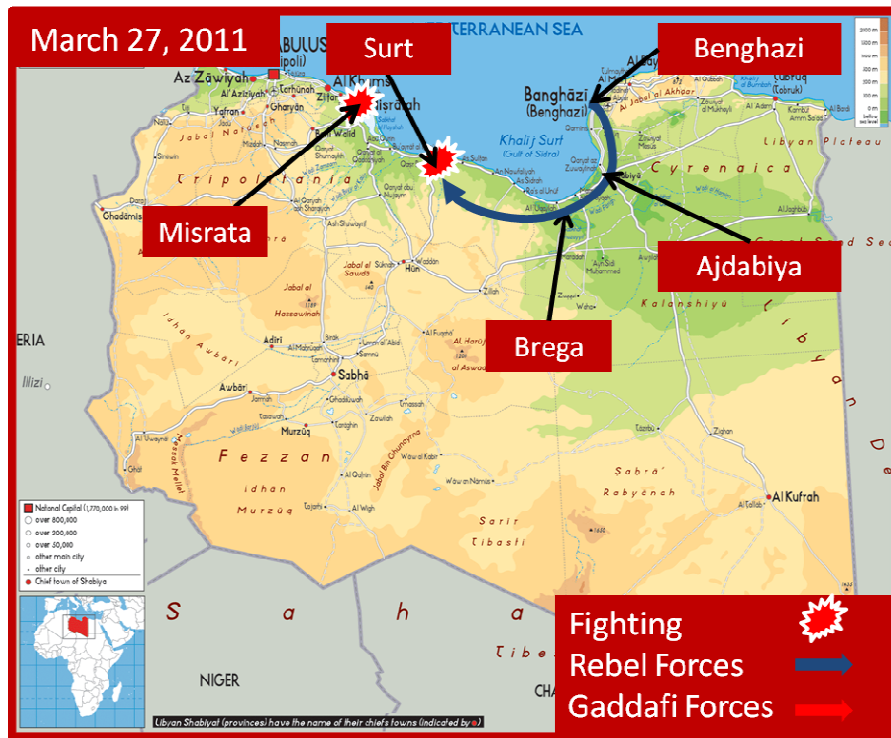
Figure 2. Libyan Crisis March 27, 2011. [43]

At this point in the operation, there was a strong possibility that the regular pro-Gaddafi forces would be able to push the rebel forces back to the strategically important town of Benghazi. If they succeeded, the Gaddafi forces would threaten the sanctuary where the TNC had established their Headquarters.[44] With the politicians failing to negotiate a ceasefire and the political direction restricting military action against non-military targets, the operation appeared to be heading towards, at best, a stalemate, and at worst, an embarrassing strategic failure for NATO.[45] In this environment, the pressure was on NATO commanders to generate an operational design that would alleviate the impasse and regain the operational initiative. The

---

[43] Original Map and dates take from: Anon, "Libya crisis in Maps. Day by Day," BBC Online, http://www.bbc.co.uk/news/world-africa-12860014 (accessed January 24, 2012).

[44] Anon, "NATO after Libya: A troubling victory," *The Economist*, September 3, 2011 under "NATO loose initiative in Libya," http://www.economist.com/node/21528248 (accessed September 12, 2011).

[45] CNN Wire Staff, 'Diplomats talk amid fierce fighting in key Libyan City.'CNN Online, http://articles.cnn.com/2011-04-09/world/libya.war_1_libyan-rebel-stronghold-rebel-forces-libyan-city?_s=PM:WORLD (accessed November 1, 2011).

participating nations did not want to conduct an extended conflict and certainly did not want to commit ground forces into the Libyan theatre.[46] The NATO commanders and planners were working with similar political and operational constraints to those faced by the US planners. The key difference was that the NATO commanders had a clear understanding that they were required to advance the operation to a definitive end-state.[47] The challenge for the NATO commanders would be whether they had the ability to interpret the strategic guidance more effectively to achieve a decisive outcome?

On March 31, 2011, pro-Gaddafi units conducted the anticipated counteroffensive against the rebel forces in central Libya and retook the strategically important town of Brega (see Figure 3). If Gaddafi's troops had broken through the defences in Ajdabiya, 40 miles east of Brega, and threatened the TNC sanctuary in Benghazi, 150 miles north of Ajdabiya, they would have tested the rebels' resolve and NATO's cohesion.[48] Fortunately, Gaddafi's forces were not capable of breaking through the Ajdabiya defences. A further breakthrough of the defences in Ajdabiya was attempted on April 7, 2011, but this failed and represented the last concerted attack on the Ajdabiya defences by Gaddafi's forces.[49] The chance factors of an ineffective enemy, a resolute rebel ground force, and the effect of NATO airpower on the will of the Gaddafi forces, overcame the manifestation of the fog and friction of war, rather than any amount of good planning and leadership. Against a more capable enemy, the outcome could have been very different.

---

[46] Sergio Cantone, "Rasmussen says no ground troops for Libya."

[47] Allied Command Transformation, *DRAFT ACT Support to Operation UNIFIED PROTECTOR Analysis Report* (Norfolk, Virginia: Supreme Allied Command Transformation, November 2011), 1.

[48] Eyal, "Accidental Heroes," 4.

[49] Eyal, "Accidental Heroes," 4.
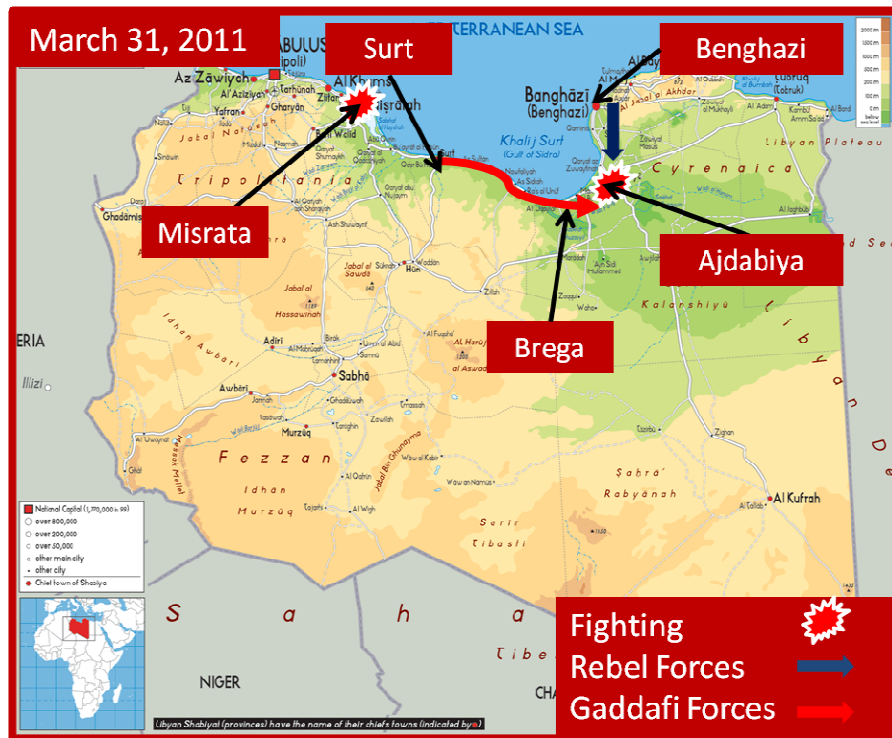
Figure 3. Libyan Crisis March 31, 2011. [50]

The attacks on March 31, 2011, and April 7, 2011, almost exposed NATO to the loss of a critical strategic objective in the first week of its command. The assessment of the reasons behind NATO's vulnerability will provide an insight into the areas NATO must address to enhance its future war fighting capability.

THROUGH THE FOG AND FRICTION, THE TRUTH EMERGES

The Libyan operation was exactly the type of operation that NATO should have been trained and prepared for as part of its new Strategic Concept. It is certainly the case that the environment of Libya, in conjunction with the political constraints and the specific challenge of working with an irregular ground force, inevitably added to the complications faced by commanders. However, NATO trains and prepares its forces extensively to respond to complex

---

[50] Original Map and dates take from: Anon, "Libya crisis in Maps. Day by Day," BBC Online, http://www.bbc.co.uk/news/world-africa-12860014 (accessed January 24, 2012).

problems such as Libya.[51] Indeed, the NATO command structure for Operation UNIFIED

PROTECTOR was certified as ready for operations by Supreme Allied Commander Europe

(SACEUR) as part of the extensive NATO Response Force (NRF) 16 preparations.[52] In theory,

therefore, the NATO command was trained and ready to respond to the Libyan crisis. However,

a command construct that works effectively in the controlled military training environment can

have its limitations brutally exposed by the fog and friction of war.

Clausewitz would have smiled ruefully if he had been able to witness the travails of

NATO commanders coming to terms with the fog and friction of war, analogous to those that

had tested his contemporaries in the early 19th century. Clausewitz stated that, "The great

uncertainty of all data in war is a peculiar difficulty, because all action must, to a certain extent,

be planned in a mere twilight which in addition not infrequently–like the effect of a fog or

moonshine–gives to things exaggerated dimensions and unnatural appearance."[53] The citation

from Clausewitz could have been written for the operation in Libya. Commanders and planners

were most certainly planning in the twilight, and the unnatural appearance of Gaddafi was

casting a long shadow over NATO operations.

The friction within the NATO command chain was an important factor defining the first

few weeks of the NATO operation, and is graphically illustrated at Figure 4. The graph

represents NATO's assessment that the relative level of control exercised by NATO commanders

during the handover of the operation declined significantly from where it had been during

Operation ODYSSEY DAWN.

---

[51] Allied Command Transformation, *DRAFT ACT Support to Operation UNIFIED PROTECTOR Analysis Report*, 1.

[52] NATO, "Ex STEADFAST JUNO," NATO Website, http://www.arrc.nato.int/page88402435.aspx (accessed October 30, 2011).

[53] von Clausewitz, *On War*, 104.

NATO C2 EFFECTIVENESS AT HANDOVER OF COMMAND
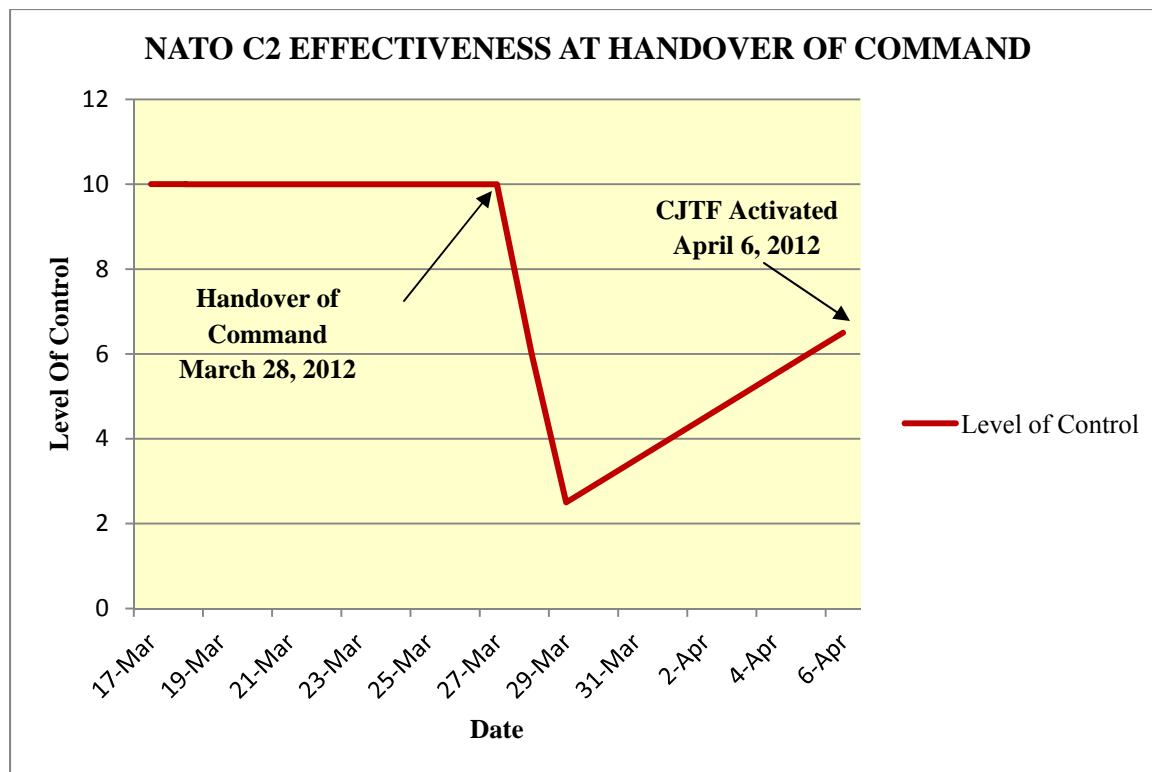
Figure 4. NATO C2 Effectiveness at Handover of Command[54]

The NATO commanders' ability to control the operation was inhibited by the friction inherent in the NATO organizational construct, designed to manage a large-scale multi-theatre Cold War operation, which should have been able to cope with a complex, yet relatively small crisis on its borders. SACEUR, US Admiral James Stavridis (who was also the Commander of USEUCOM,) took over command of the US-led operation from General Ham, and maintained overall command of the NATO operation from Belgium. US Admiral Samuel Locklear III, Commander of Allied Joint Force Command and the Maritime Component Commander, and Vice Admiral Rinaldo Veri (Italian Navy,) were both in Naples, although in different locations. The Combined Forces Air Component Commander (CFACC) Lieutenant General Ralph Jodice

---

[54] Brigadier Robert Weighill,"Libya Brief," (Lecture to Joint Forces Staff College, Norfolk, VA, March 20, 2012). Brigadier Weighill was the NATO CJTF Head Joint Plans & Operations Director for Operation UNIFIED PROTECTOR

III (US Air Force) was in Izmir, Turkey.[55] The dispersed command and control organisation

hindered the NATO commanders in the first days after the transition from the US command, and

almost allowed Gaddafi the opportunity to retake the operational initiative. Admiral Locklear

identified the vulnerability with the extant NATO command and control organisation and took

the decision to establish a consolidated Combined Joint Task Force HQ in Naples on March 31,

2011. Lieutenant General Charles Brouchard (Canadian Air Force) was designated as the CJTF

Commander. With a more focussed and cohesive staff, Lieutenant General Brouchard gradually

began to regain control of the operation.[56]

The CFACC, based in Izmir, became aware of his own lack of situational awareness and

moved to Combined Air Operations Centre 5 in Poggio Renatico, Italy, on March 29, 2011.[57]

This revised structure ensured that the CFACC was able to maintain situational awareness and

dynamism of command, which was not achievable from the permanent Air Component

Command HQ in Izmir.[58] This change of location highlighted the fact that the extant command,

control and communications architecture was not able to respond to the activity on the ground in

Libya, as the commander did not have access to the information he needed to make time-

sensitive decisions.

The ability of the CFACC to respond to the dynamic operational environment was

critical. During the US-led phase of the operation, the momentum and initiative had been

---

[55] The CFACC moved to the Combined Air Operations Centre in Poggio Renatico in Italy on March 29, 2011. The rest of the CFACC HQ functions were moved from Izmir to Poggio Renatico by the end of April. From personal recollections. I was deployed to Izmir from March 26, 2011 and moved to Poggio Renatico on 3 April 2011 after the CFACC had established himself in CAOC 5.

[56] Weighill, "Libya Brief."

[57] Nicholas Fiorenza, "NATO cuts more Fat," Aviation Week, http://www.aviationweek.com/aw/blogs/defense/index.jsp?plckController=Blog&plckScript=blogScript&plckElementId=blogDest&plckBlogPage=BlogViewPost&plckPostId=Blog:27ec4a53-dcc8-42d0-bd3a-01329aef79a7Post:4b17eb48-40b4-460c-a6bb-01d877f22f62 (accessed October 22, 2011).

[58] Nicholas Fiorenza, "NATO cuts more Fat."

established through the use of precision airpower. The fact that the NATO ground forces were limited to Special Forces, principally advising the rebel forces, meant that the effective use of airpower was vital.[59] The Kosovo campaign had provided NATO with prior experience of commanding a principally air led campaign in a challenging political and geographic environment, and the parallels between the Libya and Kosovo campaigns are quite startling.

The employment of precision weapons in concert with diplomacy in both Libya and Kosovo were essential to the eventual success of the operation, but were not decisive in isolation.[60] Lieutenant General Jodice stated in October 2011 that, "We [NATO] used precision munitions 100 percent of the time . . . I don't know that that can be said about any other operation."[61] The intent in both campaigns was to utilise air power to achieve a rapid coercive effect with minimal ground forces. Both operations centred on using precision weapons to strike targets and exert pressure on to the leadership to test their political and military will.[62] This pressure on Gaddafi's political will would strike at the heart of his centre of gravity. If successful, NATO hoped to bring about a rapid end to the conflict in Libya by forcing Gaddafi to capitulate.

Prior to the conflict, the assessment of how resilient Gaddafi would be to the concerted use of NATO air power was inconclusive. Reports in February 2011 had indicated that Gaddafi had been considering fleeing Libya, and that he was actively negotiating his exile in Venezuela

---

[59] Eyal, "Accidental Heroes," 8.

[60] Bruce R. Nardulli, Walter L. Perry, Bruce Pirnie, John Gorgon IV and John G. McGinn, *Disjointed War: Military Operations in Kosovo, 1999* (Santa Monica: RAND, 2002), 21.

[61] John A. Tirpak, "Lessons from Libya," airforce-magazine.com, 8 November 2011, under "Lessons from Libya," http://www.airforce-magazine.com/Features/airpower/Pages/box110811libya.aspx (accessed January 29, 2012).

[62] Nardulli, *Disjointed War*, 21.

or Cuba.[63] The assessment that Gaddafi had considered fleeing Libya gave politicians and

military leaders hope that, when faced with defeat, Gaddafi would flee rather than fight.

However, the politicians needed to heed the lessons learned from the Kosovo conflict, which had

demonstrated the limitations in the ability of coercive air power to influence a leader's decision-

making.[64] Daniel Byman and Matthew Waxman noted in 2000 that,

> Most academic examinations of coercion focus on a single coercive instrument
> at a time; does air power alone, for instance, cause adversaries to capitulate?
> While in reality adversaries consider the damage wrought by air power only in
> the context of overall military balance, internal stability, diplomatic support,
> and a host of other factors.[65]

The calculus for exactly how Gaddafi would react to NATO air power was as complex

and difficult to predict as it had been in Kosovo. The first indication of NATO's lack of

influence on the Libyan leadership was demonstrated on April 14, 2011 when Gaddafi paraded

through the streets of Tripoli on top of his car shouting and pumping his fists in the air.[66]

Gaddafi had demonstrated resilience and the determination to stay in power, and NATO's air

campaign was having a limited effect on the pro-Gaddafi forces. Without the US to provide the

overwhelming precision strike capability and the information and intelligence organisation to

stimulate the planning and targeting process, the operation had begun to slow down. There may

be a continuing intellectual argument on the effectiveness of coercive air power, but if the air

campaign cannot achieve basic military objectives because decisions are not being made, the

coercive effects are undermined and the objectives become unachievable.

---

[63] Aislinn Laing, "Col Gaddafi could flee to Venezuela or Cuba," Telegraph Online, http://www.telegraph.co.uk/news/worldnews/africaandindianocean/libya/8716171/Libya-Col-Gaddafi-could-flee-to-Venezuela-or-Cuba.html (accessed February 11, 2012).

[64] Daniel L. Byman and Matthew C. Waxman, "Kosovo and the Great Air Power Debate," *International Security*, Vol. 24, No. 4, (April 2000): 5-38.

[65] Ibid., 7.

[66] ITN News, "Gaddafi parades through Tripoli in an Open Top Car," You Tube. http://www.youtube.com/watch?v=lJC7smNa9jo (accessed January 27, 2012).

Bitter experience from Vietnam had demonstrated that any pause or reduction in operation tempo could be significantly counter-productive to achieving the desired coercive effect and operational end-state. Lieutenant General Jodice stated, "The pace of NATO's intelligence-surveillance-reconnaissance sorties had remained fairly even throughout the operation, but the numbers of kinetic missions ebbed and flowed."[67] The lessons learned from Operation ROLLING THUNDER (March 1965-November 1968) and the LINEBACKER raids (May-October 1972 and 18-29 December 1972) demonstrated the need to maintain operational momentum and not provide the adversary with the opportunity to recover and adapt to the coercive nature of airpower.[68]

Once again Clausewitz could point to his work from the Napoleonic era and identify that he had cautioned against the operational pause. Clausewitz certainly took a dim view of the operational pause stating, "Our belief then is that any kind of interruption, pause, or suspension of activity is inconsistent with the nature of offensive war. When they are unavoidable, they must be regarded as necessary evils, which make success not more but less certain."[69] Although the current US military doctrine (Joint Publication 5-0) advocates that operational pauses are a fundamental part of operational design, in Libya the pause was not planned. It occurred because NATO was not able to develop and implement their operational designs rapidly enough after the handover of command to achieve coercive and destructive effects on a resilient enemy, offering Gaddafi an opportunity to counterattack.[70]

---

[67] Tirpak, "Lessons from Libya."

[68] Mark Clodfelter, *The Limits of Air Power. The North American Bombing of North Vietnam* (New York: The Free Press, 1989), 164.

[69] von Clausewitz, *On War*, 247.

[70] Weighill, "Libya Brief." CJTF Operation UNIFIED PROTECTOR developed two distinct operational designs for the air and maritime campaign.

Secretary of Defense Robert Gates' blunt speeches to NATO criticising the lack of

investment appeared to have been borne out, and NATO's limitations without an overwhelming

US military capability were being realised. Against a more capable adversary NATO's lack of

capability in the first weeks of the operation could have been exploited more fully. Fortunately,

Gaddafi's forces never broke through the defensive line in Ajdabiya to threaten Bengazi.

NOTHING HAPPENS QUITE BY CHANCE. IT'S ALL ABOUT THE INFORMATION!

While NATO's ability to develop an effective plan was constrained by the friction caused

by a lack of operational coherence and capability, commanders and planners do not work in a

vacuum. Clausewitz's definition of fog is based on the principle of the uncertainty of war. The

focus of modern warfare has been to mitigate the fog of war by providing effective Intelligence

Surveillance and Reconnaissance (ISR) assets to the commander to aid his situational awareness.

Throughout the Libyan operation, the ISR assets available to NATO were sparse compared to the

integrated ISR campaign being conducted by ISAF in Afghanistan, and without US involvement

they would not have been sufficient to support the requirements of a precision air-campaign.[71]

NATO is dependent on contributing nations to provide ISR capabilities to support

operations, however, the European NATO partners were misguided in their assumption that

when they went in to a "hot" war, the US would bring along its extensive suite of ISR

capabilities. Habitually reliant on US ISR, the European NATO nations should have ensured

that their ability to generate sufficient ISR capabilities was a defence procurement priority. A

Research and Development Corporation (RAND) study in 2002 had identified the need for the

---

[71] The preponderance of US ISR assets were committed to the enduring operations in Afghanistan and Iraq. Tirpak, "Lessons from Libya." The United States Air Force was also the principal provider of air-to-air refuelling assets to the alliance. This was a critical capability that the other nations could not provide but will not be dealt with directly in this thesis. Eyal, "Accidental Heroes," 4.

non-US NATO nations to keep pace with the US air power capability. The RAND assessment

stated, "NATO's success was largely due to US air forces that flew two-thirds of all sorties and

made key contributions in reconnaissance, air defense suppression, and all-weather precision

strike."[72] With a clear tone of annoyance, Robert Gates confirmed that NATO had not addressed

the RAND findings, when he stated on June 10, 2011 that,

> The most advanced fighter aircraft are little use if allies do not have the means
> to identify, process, and strike targets as part of an integrated campaign . . .
> NATO European allies are so weak they face collective military irrelevance.[73]

The lessons learned from Kosovo and the recent experience in Afghanistan and Iraq have

demonstrated the requirement for an effective ISR capability, yet the root of Robert Gates'

frustration was that very little tangible investment in ISR has been conducted outside the US.[74]

During the Libyan campaign, the French, UK and Italian air forces flew daily fast jet

tactical reconnaissance sorties that could take still imagery of ground targets which were

processed on return to their home bases, either in Italy or on the aircraft carrier. The UK also

contributed the SENTINAL R1, a ground moving target indicator aircraft, and the NIMROD R1

Signals Intelligence platform, which flew missions every other day. The "limited" US

contribution included MQ-1 PREDATOR, MQ-4 GLOBAL HAWK, JSTARS and RIVET

JOINT platforms.[75] These aircraft were limited in number compared with operations in

Afghanistan and Iraq, with only two MQ-1 PREDATORS eventually authorised to provide real

---

[72] Nardulli, *Disjointed War,* 45.

[73]Ian Traynor, "US Defence chief blasts Europe over NATO," Guardian Online,
http://www.guardian.co.uk/world/2011/jun/10/nato-dismal-future-pentagon-chief, (accessed February 11, 2012).

[74] Paolo Valpolini, "SR Easier than I," *Armada International*, Vol 2, (April 2010):46-50.

[75] The United States also supported the NATO forces with air-to-air refueling and SEAD that were critical
to the success of the operation. The thesis will not deal directly with these enablers; however, this is an area where
NATO must ensure it has an effective plan to pool resources for future operations. Joint Coalition Operational
Analysis, *Libya: Operation ODYSSEY DAWN (OOD),* 5, and Tirpak, "Lessons from Libya." The assessment that the
US provided 80% of all ISR comes from: Carlo Munoz, "Abrial: NATO Closing ISR, Intel Sharing Gaps Exposed
In Libya," AOL Defence, http://defense.aol.com/2011/11/22/abrial-nato-closing-isr-intel-sharing-gaps-exposed-in-
libya/ (accessed February 11, 2011).

time video analysis to Operation UNIFIED PROTECTOR, but still represented over 80% of all

the ISR assets used over Libya.[76] However, the lack of habitual use of the US ISR platforms

within NATO made their integration into NATO planning and targeting processes problematic.

The information collected from the US platforms generally became confined to national

channels. In the first weeks of the Libyan operation, this information was not reaching the

NATO analysts, so could not be processed and integrated into a coordinated plan.[77]

The flow of information between the partner nations was also hindered by an information

technology architecture which proved to be largely incompatible. As the Joint Coalition

Operational Analysis report of Operation ODYSSEY DAWN highlighted, "A lack of network

capability at USAFRICOM between US and NATO systems restricted information flow between

the US and its NATO allies."[78] Making this issue doubly egregious was the fact that operational

and intelligence interoperability has been a longstanding problem between NATO and its partner

nations; one that had been experienced more recently throughout NATO operations in

Afghanistan.[79] The NATO operations in Afghanistan demonstrated the requirement for, and the

ability to create, an effective coalition network. US Army Colonel Andrew McClelland,

Communities of Interest Team Leader within the Communication Information Services Branch

in the C4ISR Division at Headquarters, NATO Allied Command Transformation (ACT), stated

in October 2011 that the Afghan Mission Network (AMN) was a concept where, "You have

---

[76] Tirpak, "Lessons from Libya."

[77] Allied Command Transformation. *DRAFT ACT Support to Operation UNIFIED PROTECTOR Analysis Report*, 2.

[78] Joint and Coalition Operational Analysis, *Libya: Operation ODYSSEY DAWN (OOD),* 9.

[79] Generalmajor Erich Staudacher, "The Afghanistan Mission Network (AMN) Reaping the Rewards of Network-Enabled Operations," NATO Website, http://www.nc3a.nato.int/SiteCollectionDocuments/GM's%20Koblenz%20IT%20Speech%202011%20reviewed%20GM.pdf (accessed January 27, 2011).

basically unabated information sharing, free to the nations that have signed up to be a part of the AMN."[80]

NATO has yet to implement fully the knowledge gained in Afghanistan across the broader alliance.[81] When NATO was required to conduct its first major war since the start of the Afghanistan operation, the US, UK, Canada and France utilized their national systems to pass critical intelligence within *national* channels, rather than utilising the NATO network.[82] This lack of integration by four of the main providers of military capability to NATO demonstrates ambivalence towards truly integrating with NATO. The US has been able to override this incongruity through sheer force of its presence in past operations, but once the US withdrew, the limitations were more evident. Information was available, but due to the lack of effective information sharing and technical integration, the passage of information was stilted, and hindered the decision-making process.

The British, American and Canadian forces do have information sharing agreements, as do the French and Americans; however, these are generally bilateral and multilateral agreements. If this information is not releasable to NATO in a timely manner to stimulate the operational planning process, its value is reduced.[83] Therefore, a fundamental mindset change is required amongst the major NATO nations to establish more encompassing information-sharing agreements. The precedent has been set in Afghanistan with the utilisation of AMN, which has

---

[80] Roosevelt, Ann. "Nations share information on Afghan Mission Network," *C4I News,* August 24,2010, under "Afghan Mission Network," http://www.defensedaily.com/publications/dd/11107.html (accessed October 31, 2011).

[81] Allied Command Transformation. *ACT Support to Operation UNIFIED PROTECTOR Analysis Report*, 5.

[82] Eyal, "Accidental Heroes,"5.

[83] Eyal, "Accidental Heroes," 5.

been an operational success. NATO nations should now incorporate the principles of AMN across the whole of the Alliance to ensure that it is better prepared for future operations.[84]

To assess the overall effectiveness of the ISR capability, it is useful to reconsider Lieutenant General Jodice's statement that, "The number of ISR sorties remained constant throughout the operation, but the number of kinetic missions ebbed and flowed." He is factually correct; however, the effectiveness of the ISR capability cannot be measured by the number of ISR sorties alone, but must be judged by the output of the intelligence products. The second part of Jodice's statement exposes a fundamental flaw in the effectiveness of the ISR capability. The numbers of kinetic missions fluctuated because the CFACC simply could not generate the intellectual stimuli into his planning process to maintain a constant level of operational momentum. To correct this problem, the CFACC retasked strike aircraft from preplanned sorties to Strike Coordination and Reconnaissance (SCAR) missions. These missions tasked the aircraft to visually search for targets of opportunity, rather than specifically task the aircraft to conduct deliberately planned strike sorties.[85] The SCAR missions tasked strike aircraft to perform missions of up to eight-hours in duration, but due to the transit times the aircraft generally only achieved one hour over the target area. The end result was a campaign with its air arm operating in a reactive, haphazard mode instead of serving as the offensive arm of a well integrated and cohesive plan.

The failure of the CFACC to generate a constant level of kinetic missions also exposed NATO's inability to create a sufficient number of viable targets without US support. When NATO took command of the air operation it had an air operations centre designed to handle

---

[84] Staudacher, "The Afghanistan Mission Network (AMN)."

[85] Anon, "International: Pressure points; the Battle for Libya." *The Economist,* 399. (April 30, 2011), 50-51 and Tirpak, "Lessons from Libya."

more than 300 sorties a day, but it struggled to launch and direct about 150.[86] NATO did not

have the ability to generate an effective list of targets for the strike aircraft to prosecute.

NATO's air operations centre in Poggio Renatico required a major augmentation of targeting

specialists, mainly from the US, to generate the targets to stimulate the flagging operational

momentum. This contributed to the ebbing and flowing of the operational tempo as stated by

Lieutenant General Jodice.

Although USAFRICOM and USEUCOM did provide targeting support, due to the friction

between the seams of the command organizations, the dynamism and adaptability of this critical

function were limited. It was not until late April 2011, nearly a month after NATO took

command of the operation, that NATO's targeting capability had a significant influence on the

operational planning process. The infusion of intellectual capital provided the CFACC the

capability he needed to start to regain the operational initiative.[87]

NATO WORKED!! NATO WORKED!! NATO WORKED!!

To quote Admiral Giampaolo Di Paola, Chairman of the NATO Military Committee, in

his speech to the 57th Annual Session of the NATO Parliamentary Assembly in Bucharest,

Romania on October 8, 2011, "NATO worked!! NATO worked!! NATO worked!!"[88] The

assumption is that the exclamation is for emphasis, rather than surprise, but the point is a good

one. NATO conducted over 26,000 air missions in support of the Libyan campaign, with 9,600

---

[86] Anon, "Always waiting for the US Cavalry," The Economist, http://ezproxy6.ndu.edu/login?url=http://search.proquest.com/docview/871281925?accountid=12686 (accessed December 14, 2011).

[87] David Hartwell, "NATO relearns old lessons on Libya," IHS Janes, September 30, 2011, under "Libyan Lessons," http://www4.janes.com/subscribe/jiaa/doc_view.jsp?K2DocKey=/content1/janesdata/mags/jiaa/history/jiaa2011/jiaa5364.htm@current&Prod_Name=JIAA&QueryText (accessed October 1, 2011).

[88] Admiral Giampaolo Di Paola, "NATO - Opinion: Speech by Admiral Giampaolo Di Paola, Chairman of the NATO Military Committee," *NATO Website*, http://www.nato.int/cps/en/natolive/opinions_79333.htm (accessed November 3, 2011).

strike sorties flown and 5,900 targets destroyed. It achieved the key objectives contained within

the NATO Strategic Concept of establishing NATO's ability to deal with a complex crisis

outside its borders.[89] NATO declared a military victory on October 31, 2011, and the French

and British governments have largely taken the credit for their leadership of the crisis.[90]

However, notwithstanding NATO's eventual success, closer analysis of the issues experienced

during the operation, reveals a worrying lack of capability across the alliance. As Libya

demonstrated, NATO can no longer assume that the US' overwhelming military power will be at

NATO's disposal to mask the alliance's limitation.

The key question within the thesis is how should the US invest in NATO to enhance the

Alliances' capability? Secretary Robert Gates' most critical assessment of the future of NATO

highlighted the lack of investment by European members in their intelligence surveillance and

reconnaissance capability, which Gates believed hindered the Libyan campaign.[91] The US needs

NATO to succeed and operate more independently as this enables the US to concentrate on

security in the Asia and the Pacific. To balance the transatlantic strategic interests, NATO

nations must learn from and then apply the lessons of Libya, and plan for the future of NATO

without overwhelming US military support.

The three key areas that NATO must concentrate on improving are ISR, operational

planning and targeting. These three areas are interconnected. The ability to utilize intelligence

and information to plan operations effectively and generate targeting data are linked to the

principles of intellectual capital through the application of skill, knowledge and experience.

NATO has capable individuals, but collectively the organization lacks the intellectual capital to

---

[89] Anon, "NATO chief Rasmussen proud as Libya mission ends," BBC Online,
http://www.bbc.co.uk/news/world-africa-15516795 (accessed November 7, 2011).

[90] Eyal, "Accidental Heroes,"11.

[91] Amiati Etezoni, "The Lessons of Libya," *Military Review,* Jan-Feb 2012 (January 2012): 45-54.

fight future wars without overwhelming US support. NATO cannot generate highly skilled

planners and targeteers rapidly, or organically. It can also not afford the range of highly

expensive ISR capabilities the US has in its inventory. What the US strategy in Libya has

proven is that the US must provide NATO with specialised capabilities that hold the alliance

together.

CHAPTER IV

MIND THE GAP

HOW THE US CAN BRIDGE THE INTELLECTUAL DIVIDE

The North Atlantic Treaty Organisation's (NATO) durability has been remarkable

considering the strategic changes since 1949; however, America's overwhelming military

capability and leadership has masked some of the fundamental flaws within the alliance. The

NATO paradigm needs to be revised and reconsidered for the changing world. If NATO nations

do not act, Robert Gates' vision of NATO's military irrelevance may come to fruition, something

that governments on both sides of the Atlantic cannot let happen.[1] This revision will be an

immense challenge for NATO. The Libyan operation demonstrated that, although NATO

prevailed and the NATO Strategic Concept was effectively endorsed, there were some important

shortfalls in its operational capability, namely the ability to integrate Intelligence Surveillance

and Reconnaissance (ISR), planning and targeting.

The challenge for NATO is that within the changing international environment, the threat

of an emerging crisis will be unforeseen. The Alliance must be prepared to react with speed and

agility, as it attempted to in Libya, but with the United States (US) in a secondary role. To

restate Sir Michael Howard, "No matter how clearly one thinks, it is impossible to anticipate

precisely the character of future conflict. The key is to not be so far off the mark that it becomes

impossible to adjust once that character is revealed."[2]

To enable NATO to respond to the uncertainty of the future international environment, it

must maintain a force that is agile, adaptable and capable of facing the challenges presented by

---

[1] Gates, "Blunt US Warning Reveals Deep Strains in NATO."

[2] Howard, "Military Science in an Age of Peace," 7.

future conflicts. The conundrum for the US is that they must look for a fiscally sustainable solution to support NATO in fighting future wars. It can no longer underwrite the European military capability and must enable a European led NATO to operate autonomously, without the US as a dominant presence. To achieve this, the US should look beyond the obvious military paradigm and assess how large corporations achieve the intellectual capital that enables them to prosper.

Large corporations utilize complex operational processes and face the perpetual demands from shareholders for profits. Without an effective strategy, these corporations would, and do, fail. The theory that corporations utilize to maintain an advantage is investment in intellectual capital.[3] *Intellectual Capital* is the theory primarily credited to Thomas A. Stewart, but a number of other authors, including William J. Hudson, have also written extensively on the subject and the principle has been widely adapted. The premise of the theory is that the success of an organization is directly related to the intellectual capital that it possesses. Stewart states that, "Walmart, Microsoft and Toyota did not become great companies because they were richer than Sears, IBM and General Motors. Their success was founded on their ability to utilize their intellectual capital."[4] Stewart defines the theory of intellectual capital as:

> Intellectual capital is just that: a capital asset consisting of intellectual material. To be considered intellectual capital, knowledge must be an asset able to be used to create wealth. Thus, intellectual capital includes the talents and skills of individuals and groups; technological and social networks and the software and culture that connect them.[5]

---

[3] For the principle theories on Intellectual Capital read: Thomas A. Stewart, *Intellectual Capital: The New Wealth of Organizations* (New York, Doubleday, 1997), 1-12 and William J. Hudson, *Intellectual Capital: How To Build It, Enhance It, Use It* (New York, John Wiley and Sons, 1993), i-ix.

[4] Stewart, *Intellectual Capital*, 10.

[5] Ibid., x.

Stewart's definition of intellectual capital takes two distinct forms: semipermanent and permanent. Semipermanent intellectual capital grows around a person or organisation for a specific task.[6] In the military context, this is the information and knowledge that personnel accrue during a specific operation. Permanent capital is the institutional tools that enable knowledge to be exploited.[7] The permanent capital in the military is the physical tools and the training that enable personnel to optimise their semipermanent intellectual capital. By applying Stewart's definition to the military context, a recommended definition of military intellectual capital could be stated as the "*human and organisational capability that enables the commander to use knowledge and information effectively to apply force and achieve an advantage over an adversary.*" Essentially, intellectual capital is the ability to utilise and harmonise the skills and expertise of military personnel and equipment to achieve an operational advantage.

But how does the theory of intellectual capital relate to gaining an operational advantage? In his decision-making model, John Boyd explained that the process of gaining an operational advantage was achieved through the Observation, Orientation, Decision and Action (OODA) loop.[8] Many other theories of decision-making have been published, but Boyd's enduring OODA loop has an expansiveness that can be applied to the application of intellectual capital.[9] The graphical representation of the OODA loop is at Figure 5.

---

[6] Stewart, *Intellectual Capital*, 132.

[7] Ibid.

[8] Robert Coram, *Boyd: The Fighter Pilot Who Changed the Art of War* (Boston, Little Brown, 2002), 327-344.

[9] Two contrasting decision-making models are offered by Malcolm Gladwell, *Blink* (New York: Back Bay Books, 2007), and Michael R. LeGault, *Th!nk (*New York: Threshold Editions, 2006).
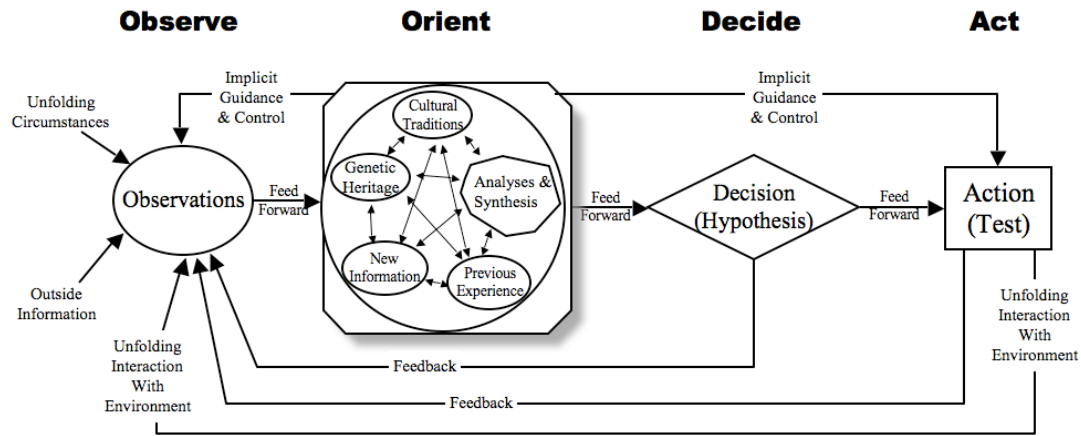
Figure 5. Boyd's OODA Loop. [10]

Boyd described the innate ability to observe and orientate to problems as the critical skills that enabled effective decision-making to be conducted at a faster tempo than an adversary.[11] This ability to react faster than an adversary enabled an individual or organization to gain an advantage. Boyd stated that this required the observer to "yield to human qualities, such as culture, heritage and previous experience."[12] Enhancing the experience and knowledge of personnel enables them to orientate to problems more effectively and enhance their decision-making process. These human qualities are intrinsic in the theories of intellectual capital. By influencing the common shared skills, knowledge, experience and traditions within an organisation, leaders can enhance the organisation's intellectual capital and influence its collective ability to make decisions more effectively. Therefore, the US can directly improve NATO's ability to act by influencing the development of NATO's intellectual capital. However, the US must be prepared to commit to developing NATO's intellectual capital in the long term. Stewart cautioned that developing intellectual capital was not necessarily a short-term process.

---

[10] Coram, *Boyd*, 344.

[11] Ibid., 334

[12] Ibid., 335.

Results could be achieved quickly with an infusion of intellectual capital and training, but long-term success requires continual management and investment in intellectual capital to maintain the relative advantage.[13]

If the US channelled its intellectual capital investment into providing additional personnel and training courses to NATO it could enhance NATO's short-term capability, but this would not help NATO sustain its long-term readiness. The US must assist NATO in developing its organic intellectual capital and provide not only the means to generate an operational advantage, but the ways to sustain it for the future without an overwhelming US presence. The specific areas of NATO's intellectual capital that the US needs to invest in are NATO's ISR, operational planning and targeting capability.

ISR – IT'S NOT ALL ABOUT THE AEROPLANES

The lessons that have been identified after the Libyan operation are analogous to the lessons identified from Kosovo and Afghanistan. The US maintains the overwhelming ISR capability within NATO, and owns the Information Technology network architecture and systems that enable the long-range and long-endurance collection systems to function.[14] Although the lessons may have been identified, the non-US NATO nations currently lack the ability to invest large portions of their national budgets in defence programmes, aimed at rectifying any of the shortcomings identified after the Libyan operation. Realistically, this will not change in the current fiscal environment.

The problem facing NATO is to look for alternative solutions to enhance their ISR capability. The use of smart technology and ISR systems will be central to NATO's future

---

[13] Stewart, *Intellectual Capital*, 98-100.

[14] Paolo Valpolini, "SR Easier than I," 46-50.

military effectiveness, but the ability to apply the technology is as important as the platform that collects the information.[15] The temptation for politicians and military leaders is to procure an air platform that will gain headlines and be a sop to criticisms of a lack of defence procurement. General Mark Welsh III, Commanding General, USAF Europe, suggested that, "less-wealthy NATO nations might consider choosing cheaper ISR assets over more expensive combat platforms when modernising their air forces, as there was a critical need for these capabilities."[16] NATO does have an existing Alliance Ground Surveillance (AGS) programme that is procuring up to six Northrop Grumman RQ-4 GLOBAL HAWK aircraft; however, the viability of this programme is in question as the high cost is driving a number of nations to drop out.[17] Even if all the aircraft were procured, this is too limited a number of aircraft to achieve a decisive organic capability and the US will need to remain engaged with NATO in providing ISR platforms to support future NATO missions. However, significantly, NATO must limit its inclination to procure expensive ISR collection platforms without considering what it is going to do with the information once it is collected.[18]

NATO must focus on its ability to share information effectively. It also needs to ensure that it has enough skilled and competent analysts available to exploit the information gathered in an emerging crisis. NATO's Supreme Allied Commander for Transformation, French General Stephane Abrial, acknowledged NATO's ISR shortcomings in November 2011 when he stated "NATO needs to close the ISR and intelligence sharing shortfalls exposed during the (Libyan)

---

[15] Office Of The Under Secretary Of Defense, Comptroller, *United States Department Of Defense Fiscal Year 2012 Budget Request* (Washington, DC: Department of Defense, February 4, 2011), 2-3.

[16] Eyal, "Accidental Heroes," 3.

[17] Bradley Peniston, "Budget Cuts reducing NATO's planned UAV purchase," ACUS.org, http://www.acus.org/natosource/canada-withdraws-nato-uav-program (accessed December 28, 2011).

[18] The United States currently has an inventory of 20 GLOBALHAWK aircraft, from, Department of the Air Force, "factsheet RQ-4 GLOBALHAWK, " USAF Website, http://www.af.mil/information/factsheets/factsheet.asp?id=13225 (accessed February 29, 2012).

operation."[19] This is the core concept at the heart of developing permanent and semipermanent intellectual capital. Unfortunately, unlike procuring an aircraft, NATO nations cannot simply go and buy intellectual capital. It takes time, experience, and knowledge to develop skilled and effective analysts. The US could inject significant resources into NATO's intelligence capability, but the US also has limited analytical resources and has experienced a critical shortage in analysts whilst fighting wars in Afghanistan and Iraq.[20] Therefore, to resolve the long-term problem, NATO must generate a sustainable cadre of ISR analysts who will be able to provide the analytical resources to support NATO missions, and start to take the burden of analytical requirement away from the US.

NATO does provide training for intelligence analysts with a one-week course at Oberammergau in Germany.[21] The course provides a basic explanation of the intelligence process, but does not produce analysts. The course content is theoretical and provides no gauge on how analysts destined for NATO posts will add analytical value to the commander. NATO is fundamentally reliant on individual nations providing a suitable calibre of trained personnel to make it work. The practice of NATO accepting the ad hoc assignment of personnel rather than establishing sound human resource and quality management practice must be addressed. This issue was recognised by NATO in 2010 when a report from the National Defense University stated that:

---

[19] Munoz, "Abrial: NATO Closing ISR, Intel Sharing Gaps Exposed In Libya."

[20] Dr Edna Reid, "Information Professionals as Intelligence Analysts: Making the Transition," GovernmentInfo Pro., http://www.governmentinfopro.com/federal_info_pro/2010/01/information-professionals-as-intelligence-analysts-making-the-transition.html (accessed January 29, 2012).

[21] NATO ACT, NATO School, *N2-03 NATO Intelligence Analyst Course (NIAC)* (Norfolk, Virginia: NATO ACT, 2011), 1.

In short, many staffers assigned to NATO come as much to learn as to contribute. At some headquarters, the pool of high-performing staff officers is far below 50 percent of those assigned, simply because nations are not sending fully qualified personnel.[22]

This is a sensitive issue as nations provide personnel to NATO with the best of intentions. But, there is a fine balance to be struck in delivering an effective operational capability. The concern is that when the US withdraws its troops from Europe, the shift in balance may result in a less effective NATO military capability. Thus, to improve the overall quality of intelligence personnel, the current NATO intelligence analyst's course must be revised, along the lines of the 16-week US Air Force Operational Intelligence course.[23]

Thomas A. Stewart noted "A 10 percent increase in workforce education level led to an 8.6 percent gain in total factor productivity. By comparison, a 10 percent rise in capital stock increased productivity just 3.4 percent."[24] One should not view this statement as a direct comparison between a military and a civilian organisation as it is a simplistic example of how intellectual capital can improve productivity. However, if NATO were to invest in the quality of analysts by addressing the basic intelligence course content and developing an accreditation process for analysts who had already undertaken national training, the quality of personnel and the overall competency of the NATO intelligence community would increase. It is recommended that the US support the initiative by providing intelligence specialists from the US Air Force Intelligence School to assist NATO with developing the new course and accreditation criteria.

---

[22] W. Bruce Weinrod and Charles L. Barry, *NATO Command Structure: Considerations for the Future*, (Washington, DC: National Defense University, 2010), 30.

[23] US Air Force, "Careers: Operational Intelligence Analyst," US Air Force.com, http://www.airforce.com/careers/detail/operations-intelligence-specialist/ (accessed 12 February 2012), Rod Powers, "Army Enlisted Job Descriptions and Qualification Factors 35F-Intelligence Analyst," About.com-militaryjobs, http://usmilitary.about.com/od/enlistedjobs/a/96b.htm (accessed January 29, 2012).

[24] Stewart, *Intellectual Capital,* 85.

NATO has made attempts to develop an integrated intelligence capability with the

establishment of the Intelligence Fusion Center (IFC) at RAF Molesworth in England in 2006.[25]

Following the Prague summit in 2002, the IFC was established in response to the requirement to

support NATO's expeditionary capability, with the US as the framework nation. The IFC was

deliberately located next to the US Air Forces Europe Joint Analysis Center at RAF Molesworth

to provide direct integration with the US intelligence community.[26] However, the IFC struggled

to support the operation in Libya. It failed to provide the timely targeting information that was

so critical to the mission in the first few weeks, and needed significant support from the US

Combatant Commands to address the demanding intelligence and operational requirements

during the operation. To develop the IFC concept to support the future NATO requirement, the

IFC needs to be bolstered with the systems and the personnel that will raise the capability and

capacity of the organisation.[27]

The IFC should be established as an ISR centre of excellence and be recognized as the

central intelligence fusion centre for all NATO operations. As part of the Smart Defence

initiative, NATO, assisted by the US, must generate a cadre of experienced and capable analysts

who will provide the intellectual capital within the IFC to act as the focus and coordination for

all NATO ISR operations. With the intellectual capital that is generated within the IFC, its staff

should become the core staff for any deployed NATO Headquarters or operation.

The IFC should also be enhanced with a connection to the US Distributed Common

Ground System (DCGS) architecture that would enable NATO to receive information and

---

[25] UK MoD, "Launch of the Intelligence Fusion Centre," Security Oracle, http://www.securityoracle.com/news_articles/Security_news/NATO_Intelligence_Centre_Opens_In_UK_11468.htm (accessed January 3, 2012).

[26] Ibid.

[27] USAFE, "501st Combat Support Wing," USAFE.AF.Mil, http://www.501csw.usafe.af.mil/units/molesworth/index.asp (accessed December 28, 2011).

intelligence feeds at the appropriate classification in support of NATO operations. This will be a

significant challenge, principally due to security classification of the DCGS architecture, which

runs principally on the US Secret Internet Protocol Router Network (SIPRNET). This network

provides the information architecture for the majority of the US military ISR community at the

US SECRET//NO FOREIGN NATIONAL security level.[28]

The experience of the NATO mission in Afghanistan has demonstrated the utility of the

Afghan Mission Network (AMN) as a system that enables nations to share information across

national boundaries. However, it has taken AMN a period of seven years to become effective

and to gain the support of NATO and ISAF members, who have overcome national security

caveats to enable effective information sharing.[29] For NATO to be effective in future crises, the

ability to share information rapidly will be critical. Nations must ensure that they have the

security procedures in place to share information from the start of the NATO operation, rather

than four weeks into the mission which was the case in Libya. NATO must take the AMN

concept for information sharing and use it to develop the existing broader NATO architecture.

The existing NATO Battlefield Information Collection and Exploitation System (BICES) should

have allowed the effective exchange of information and intelligence among the Libyan coalition

members through the use of interoperable national and NATO systems, but the failure to share

information across NATO was an institutional problem that proved a major hindrance to

operational success.[30] BICES is a sound principle, but the system is not being implemented

---

[28] Global Security, "Distributed Common Ground Systems," Global Security.org, http://www.globalsecurity.org/intell/systems/dcgs.htm (accessed December 28, 2011).

[29] AMN was fully implemented in 2010 after an extended period of NATO systems being used in parallel with national systems, which had maintained primacy for the majority of the ISAF nations since the start of the NATO mission in Afghanistan in 2003. HQ Air North, "The Afghanistan Mission Network," NATO Website, http://www.airn.nato.int/focus_areas/mjo/articles/mjo0310.htm (accessed February 12, 2012).

[30] NATO, "Transformation Network," NATO Website, https://transnet.act.nato.int/WISE/Entities/BICES, (accessed February 12, 2012).

rigorously outside Afghanistan, with nations routinely reverting to national systems. At the next NATO ministerial in Chicago in May 2012, the NATO Secretary General and Supreme Allied Commander Europe should seek member consensus on establishing a true NATO Intelligence Fusion Center, enabled with a network and sharing agreements that will resolve some of the fundamental problems that hindered the Libyan operation.

PLANNING – AN INDISPENSABLE REQUIREMENT FOR FUTURE WARS

A key element of Boyd's OODA loop theory is orientating to a problem. The requirement to provide information and intelligence to stimulate decision-making is critical, but the decision maker needs to be able to process and utilise information coherently to enable him to decide what to do to resolve a problem. The theory infers that a level of shared experience and a common understanding of how to undertake a complex problem are imperative to make a decision. In the military context, at the operational level, the function of orientation to a problem is undertaken by operational planners. During the Libyan operation, planners were not able to generate the critical analysis to generate the planning to support the commander's decision-making. Indeed, President Eisenhower during his tenure in office from January 20, 1953–January 20, 1961, echoing his military experience from World War 2, made the statement that, "plans are nothing; planning is everything." This statement resonates with the operational experiences in Libya. The commander was hindered in his ability to understand the Libyan problem and was unable to conduct effective planning to counter the threat of Gaddafi's forces.[31]

NATO generates operational planners through individual nations providing trained personnel to the alliance, which puts them through a two-week familiarization course at the

---

[31] Dwight D. Eisenhower, *Public Papers of the Presidents of the United States* (Washington D.C: National Archives and Records Service, Government Printing Office, 1957), 818.

NATO School in Oberammergau, Germany.[32] The NATO planning course provides an

overview of Tactics, Training and Procedures based on the NATO Comprehensive Operations

Planning Directive (COPD). The two-week course enables NATO planners to integrate their

national experience into the NATO environment and provides students with a common NATO

planning lexicon. However, as with the NATO intelligence analyst course, it does not instruct

the students in the fundamentals of conducting operational planning.[33] The process has proven

wholly inadequate in preparing NATO planners for a dynamic operational environment, an issue

that has been recognised by NATO Allied Command Transformation (ACT).[34] The experience

of Libya highlighted that a lack of common understanding and knowledge offsets the benefit of

establishing a broad base of international experience. This must now be addressed.

To enhance the NATO planning capability, the US should assist NATO in developing a

course designed specifically for future senior NATO planners. The model that the US and the

United Kingdom (UK) have used is to focus on the development of planners at the NATO Code

Officer (OF) 4/5 level.[35] The intent of the US Joint Advanced Warfighting School (JAWS) and

the UK's Advanced Command and Staff College is to educate officers over an 11-month period,

---

[32] NATO "Oberamergau Planning course syllabus," NATO Online, https://www.natoschool.nato.int/academics.asp (accessed February 12, 2012).

[33] NATO, *Comprehensive Operations Planning Directive* (Brussels: NATO Office of Information and Press, 2011), 1-20.

[34] Allied Command Transformation. *DRAFT ACT Support to Operation UNIFIED PROTECTOR Analysis Report*, 1.

[35] The mission statements of the JAWS and ACSC courses detail the aims of the courses. The JAWS curriculum is clearly focussed on "high end" operational art and planning. This specific and concentrated focus allows for more in-depth immersion and applied rigor than is possible in many more standard military education institutions. Based, in part, on the existing curricula of the Joint Forces Staff College's Joint and Combined Warfighting School Senior Course, the JAWS curriculum endeavours to balance between operational and strategic studies and between warfighting and war preparation. Joint Forces Staff College, "JAWS Course description," NDU Website, http://www.jfsc.ndu.edu/schools_programs/jaws/course_materials.asp (accessed January 6, 2011). The ACSC addresses a wide spectrum of military, political and international issues and is principally concerned with the conceptual basis of capability, its development and subsequent employment. Defence Academy of the UK, "Advanced Command and Staff Course," MOD Web, https://da.mod.uk/colleges/jscsc/acsc (accessed January 6, 2011).

with the knowledge and skills that will enable them to command and lead operational planning in a dynamic operational environment. This education provides the depth of knowledge and common understanding of process that the current NATO system cannot achieve.

NATO has an existing mechanism to educate senior personnel through the Defense College Senior Course Programme in Rome. The aim of the Senior Course is to

> Better prepare OF5/4 level officers and equivalent level civilian officials of the Alliance, the Euro-Atlantic area, Mediterranean Dialogue (MD), Istanbul Cooperation Initiative (ICI) and Selected Contact countries for senior appointments in NATO and multinational staffs or NATO-related duties in Capitals.[36]

Although the course content will prepare senior officers for staff posts, it does not address the requirement to prepare senior officers to command and plan an operation. The course focuses on NATO's geopolitical role rather than how NATO will deliver operational effect.

As identified by W. Bruce Weinrod and Charles L. Barry, the attendance at National Staff Colleges still takes precedence over NATO Staff College for most of the principal contributing nations.[37] For NATO to be effective in the future, the European nations in coordination with NATO ACT, which coordinates the NATO Defence College course, must either establish a new planning course or significantly revise elements of the senior course to represent the requirement for operational command within NATO. NATO ACT must either integrate the operational planning and leadership elements contained within the NATO Comprehensive Operations Planning Directive into the existing senior course, or develop a dedicated training course for future NATO senior planners and leaders in line with the US and UK education strategy.

---

[36] NATO, "NATO Defense College Senior Course Aims," NATO Defense College. http://www.ndc.nato.int/education/courses.php?icode=14 (accessed December 27, 2011).

[37] Weinrod, *NATO Command Structure*, 30.

To enhance the course content, the US should assign a recent JAWS graduate to NATO ACT. This individual must assist NATO with developing a course that will provide a sustainable generation of effective planners and commanders into the NATO system. By developing a course that provides a pipeline of high quality personnel into key NATO operational posts, NATO will start to generate a cadre of personnel with the intellectual capital to deal more effectively with the types of complex crises that it is likely to encounter in the next ten years.

TARGETING – HOW CAN NATO ACHIEVE ITS AIM

The challenge for NATO in developing a cadre of targeting specialists is that NATO will require significant input from the US. The US is the principal supplier of geo-rectified targeting imagery that provides the basis for the development of targeting assessments.[38] This imagery is generally only available from the US, and, by extension, the majority of deliberate NATO targeting has been conducted by the US. The limitation with this process is that NATO is reliant on the US providing the analytical capacity to support NATO operations. This limitation was exposed during the Libyan operation when targets took too long to be generated by the US targeteers, and pilots refused to fly on designated targets, because the information that supported the targeting decisions was not timely.[39] There was a delay of almost four weeks between NATO taking command of the operation and an adequate number of targeting specialists being made available to support the operational and planning effort.

General Abrial acknowledged the reliance of NATO on the US for support with the target development process, nevertheless criticised the time it took NATO to receive targeting imagery

---

[38] Anthony H. Cordesman, *The Lessons and Non-Lessons of the Air and Missile Campaign in Kosovo* (Westport, CT: Praeger, 2001), 129-135.

[39] Robert Densmore, "French Pilots Over Libya Decline US Intel; Clearance Just Too Slow," AOL Defense, http://defense.aol.com/2011/09/21/french-pilots-over-libya-decline-us-intel-clearance-just-too-sl/ (accessed February 19, 2012),

to support the commander during the Libyan operation.[40] A further internal report produced by

NATO ACT specifically identifies the long-term shortfall in the skill levels of targeteers within

NATO.[41] The report references documents from 2006, 2007 and 2011 that identified the lack of

trained, experienced, and capable targeteers as a major limitation in conducting operations in

Afghanistan. There is recognition within NATO that it must develop an organic cadre of

targeteers, and although NATO criticised the time it took the US to generate targets, no

alternative solutions are on the immediate horizon to resolve the issue. The assumption within

NATO has been that the US will step in and provide the bulk of the targeting support; however,

this is not sustainable and the Libyan operation exposed the flaw in the assumption.

To rectify the issue, NATO members must agree to establish an organic NATO targeting

capability. The NATO targeting doctrine is effective and based on the best practice of the

member nations, but the lack of analytical capacity and access to information constrains NATO's

ability to produce its own targeting products.[42] The IFC does produces targeting products, as

tasked by Allied Command Operations, but, as with the planning and ISR capabilities, the IFC

did not have the capacity and intellectual capital to support the operation in Libya.[43]

To enhance NATO's targeting capability, NATO must increase the total number of

qualified targeting specialists working in NATO positions. A follow-on NATO study is

necessary to determine the exact number of targeteers required to fulfill NATO's targeting

requirement. To achieve an increased NATO targeting capacity, the US must assist NATO with

developing a NATO targeting course that reflects the rigorous requirements of the US targeting

---

[40] Munoz, "Abrial: NATO Closing ISR, Intel Sharing Gaps Exposed In Libya."

[41] Allied Command Transformation. *DRAFT Proposal for New Deliverable – Joint Fires Integration,* (Norfolk, Virginia: Supreme Allied Command Transformation, 2011), 1-2.

[42] Allied Command Operations, *MC-471/1, NATO Targeting Policy* (Brussels, Belgium: Supreme Headquarters Allied Power Europe, June 2007) 1-10.

[43] UK MoD, "Launch of the Intelligence Fusion Centre."

training syllabus.[44] The graduates from the NATO targeting course should form a standing cadre

of expertise at the IFC. These personnel should be deployable and provide the nucleus of the

targeting specialists within a planning staff.

The challenge for NATO will be achieving the policy agreements with the US to release

imagery in a timely manner. This has been a long-standing challenge for NATO and has not

been resolved throughout the Afghanistan conflict. A large number of papers, books and articles

have advocated the need for a more equitable information sharing relationship, but the inherent

risk reward calculus of maintaining national security, whilst making sensitive information

available to a broad alliance, challenges the conservative nature of military and civilian security

professionals.[45] Indeed, James R Clapper Jr, the Director of National Intelligence, has

highlighted the fact that the problem of information sharing has still not been resolved. He has

also asserted that the significant budget cuts that the intelligence community is liable to undergo

will further limit the US' ability to support NATO missions.[46]

---

[44] Secretary of the Air Force, "AIR FORCE INSTRUCTION 14-117," US Air Force, http://www.e-publishing.af.mil/shared/media/epubs/AFI14-117_AFGSCSUP_I.pdf, (accessed February 12, 2012).

[45] There is a vast array of opinions on the need for NATO to acquire greater intelligence and information sharing. This is not a new phenomenon and was articulated by Todd Sandler and John F Forbes, "Burden Sharing, Strategy, And The Design Of NATO," *Economic Inquiry* Summer 1980 (July 18, 1980): 425 -444. The theme was continued by Charles E. Phillips, Jr., T.C. Ting, and Steven A. Demurjian, "Information sharing and security in dynamic coalitions." ACM, http://doi.acm.org/10.1145/507711.507726 (accessed January 2, 2012). However, there is discord on how information sharing should be achieved. Editorials in the Wall Street Journal and the Washington Post have been contradictory on how far the United States should go to share information and technology with NATO partners. Tom Donilon, "The continuing need for a strong NATO," The Washington Post, http://ezproxy6.ndu.edu/login?url=http://search.proquest.com/docview/900749709?accountid=12686. (accessed December 28, 2011), advocates how intelligence sharing has assisted in Afghanistan but Adam Entous and Julian E. Barnes, "US Pursues Sale of Armed Drones," Wall Street Journal, http://ezproxy6.ndu.edu/login?url=http://search.proquest.com/docview/910931892?accountid=12686. (accessed January 2, 2012) caution on selling RPASs to NATO.

[46] James R. Clapper Jr, "How 9/11 transformed the intelligence community; it's no longer about need to know. Our guiding principle is responsibility to share." Wall Street Journal, http://ezproxy6.ndu.edu/login?url=http://search.proquest.com/docview/887725336?accountid=12686, and Walter Pincus, "Clapper, Double Digit Cuts coming to Intel Community," Washington Post, http://www.washingtonpost.com/blogs/checkpoint-washington/post/clapper-double-digit-cuts-coming-for-intel-budget/2011/10/17/gIQAbSvIsL_blog.html (accessed January 2, 2012).

This will not be an easy problem to resolve; however, key leaders such as General Abrail and Director Clapper are identifying the need to share information as a principal enabler to ensure that alliances and coalitions work effectively. Establishing an effective NATO targeting capability will take bold leadership and an element of risk within the US intelligence community. However, it is a risk that must be taken if NATO is to resolve the challenges it will face over the next decades, without relying on an overwhelming US military presence.

CONCLUSION

Let our Advanced Worrying be Advanced Thinking and Planning

Winston Churchill

As North Atlantic Treaty Organisation (NATO) assesses the military victory in Libya, it must consider how it adapts to the demands of a challenging future international environment without an overwhelming US military presence in Europe. The US Department of Defense's Priorities for 21st Century Defense, issued in January 2012, and was prompted by the necessity to balance the domestic economy and to provide direction to the Services after long wars in Afghanistan and Iraq.[1] This strategy indicates a realignment of US focus towards Asia and the Pacific. A consequence of this change in strategy is a realignment of forces in Europe, with the planned removal of two of the four US Army brigades in Europe, and more forces likely to follow.[2] The realignment of the US' permanent presence in Europe changes the calculus on the effectiveness of NATO's reaction to emerging threats.

The US has been remarkably loyal in supporting NATO throughout its existence and, particularly, during previous periods of significant fiscal austerity. Some of the other nations cannot be merited with such a resounding commitment. US investment in NATO after the Vietnam War ultimately contributed to the end of the Cold War, and US leadership and vision for NATO after the collapse of the Soviet Union established NATO's post Cold War military credentials.[3] An assessment of the 1999 Kosovo campaign identified that the US military made the overwhelming contribution to the prosecution of the precision air campaign, whereas,

---

[1] US President, *Sustaining Global Leadership*, 1.

[2] Associated Press, "Panetta: Army to Withdraw 2 Brigades From Europe,"

[3] Secretary General of NATO, *Strategic Concept,* 1.

assessment of the European NATO nations involved revealed a lack of significant investment in reconnaissance, air defense suppression, and all-weather precision strike.[4] Over the course of the decade following Kosovo, European military budgets have decreased further. This decline has made many of the European NATO nations reluctant to finance an equitable share in European security. This reluctance has caused friction within the alliance, in particular between former US Secretary of Defense Robert Gates and the European nations.

Secretary Gates was a vocal critic of the lack of European investment in NATO. Most notably, in June 2011, he warned that the European nations faced military irrelevance unless they started to invest in their ability to conduct an integrated air campaign.[5] The underinvestment by European nations in their military budgets and capabilities was exposed during the conflict in Libya. The European nations assumed that the US would provide the niche capabilities that would support a precision air campaign; however, the US decision to take a more withdrawn role exposed the fundamental weaknesses in the NATO capability.

The critical areas of shortfall relate back to the lessons identified in Kosovo and the issues observed by Secretary Gates. NATO lacks the ability to conduct and plan an autonomous operation without overwhelming US support.[6] Lieutenant General Ralph Jodice III, the Combined Forces Air Component Commander, highlighted the problem by stating, "The pace of NATO's intelligence-surveillance-reconnaissance sorties remained fairly even throughout the operation, but the numbers of kinetic missions ebbed and flowed."[7] The lack of ability to maintain the high level of operational tempo allowed the adversary to gain the operational

---

[4] Nardulli, *Disjointed War,* 45.

[5] Traynor, "US Defence chief blasts Europe over NATO."

[6] Eyal, "Accidental Heroes," 4.

[7] Tirpak, "Lessons from Libya."

initiative. This lack of ability to conduct an effective air campaign was not due to a lack of strike aircraft, but due to the lack of intellectual capital in key areas of NATO's organisation.

Although the European-led NATO operation in Libya ultimately prevailed against pro-Gaddafi forces, against a more effective adversary the operational weaknesses exposed in the first weeks of the NATO operation could have brought about a very different military outcome. If NATO had failed to prevent the advance of pro-Gaddafi forces in central Libya from March 27 -April 7, 2011, the loss of the critical strategic town of Benghazi could have ultimately resulted in the loss of the conflict. If NATO had lost the conflict in Libya, the viability of NATO as an effective military alliance would have been brought into question. History will show that the NATO operation in Libya did prevail, but in order for NATO to be prepared for future wars it must now assess the lessons of the Libyan conflict, and rectify its significant shortfalls.

Even though the US is looking to reduce its military presence, Europe still represents an important part of US national strategy. However, the current and future fiscal reality determines that the US must identify a strategy to deliver an effective NATO with minimal financial outlay. As NATO's European nations cannot afford large scale capital procurement programmes in the current austere environment, the US will need to maintain engagement with NATO as part of the NATO Smart Defence initiative to provide critical equipment capabilities. Critically, the US must also assist NATO with building intellectual capital amongst its personnel.[8] In this thesis, the suggested definition of military intellectual capital is "*human and organisational capability that enables the commander to use knowledge and information effectively to apply force and achieve an advantage over an adversary.*" The assessment of the Libyan operation has established that the priority for the US must be to assist NATO in developing the skills and knowledge of NATO personnel in the areas of Intelligence Surveillance and Reconnaissance

---

[8] NATO Secretary General, "NATO Secretary General calls for "Smart Defence"."

(ISR), planning and targeting to ensure that they can achieve an operational advantage in future wars. The recommendations for the specific areas that the US should assist NATO in developing its intellectual capital are detailed in Figure 6.

	RECOMMENDATION
1	Establish the NATO Intelligence Fusion Centre as the Centre of Excellence for NATO ISR
2	The US to assist NATO in rewriting the NATO Intelligence Analyst Course and establish a criteria for accreditation of intelligence personnel
3	Establish an agreement between NATO and the US to support NATO Distributed Common Ground System missions from within the Intelligence Fusion Cell
4	The US to assist NATO Allied Command Transformation in establishing a NATO operational planning course to complement or replace the current NATO Senior Course
5	The US to support NATO in developing a cadre of targeting specialists based in the Intelligence Fusion Centre
6	The US to assist NATO in establishing a NATO Targeting Course and establish a criteria for accreditation of targeting personnel
7	The US and NATO to agree a sustainable information and intelligence sharing agreement

Figure 6. Recommended Areas for Investment in the Intellectual Capital of NATO.

The US can no longer provide the overwhelming military capability that has for many years masked the limitations of the alliance, but it can provide critical investment in NATO ISR, operational planning and targeting capability to deliver a sustainable alliance. This will be challenging due to several factors; first, the very nature of the way that NATO is manned by its alliance members; second, the inherent security concerns and institutional mistrust between the US and Europe; and third, the reductions in defence budgets across the alliance. If the US is to

maintain its global position and influence in the international community, it must empower its

Allies and enable NATO to be prepared for future wars. Investing in NATO's intellectual capital

will not resolve all of the challenges, as the challenges of the future war cannot be accurately

defined. Nevertheless, for the alliance, intellectual investment in the ISR, operational planning

and targeting capability will enable it to be not so far off the mark that it becomes impossible to

adjust once the future war is revealed.

BIBLIOGRAPHY

BOOKS

Barno, Lieutenant General David W USA (Ret.), Nora Bensahel and Travis Sharp. *Hard Choices Responsible Defense in an Age of Austerity.* Washington: Center for a New American Security 2011.

Bartlett, Henry C., G. Paul Holman Jr. and Timothy E. Soames. "The Art of Strategy and Force Planning," in *Strategy and Force Planning,* 17-33. Newport, RI: Naval War College Press, 2004.

Bialos, Jeffrey P and Stuart L. Koehl. *NATO Response Force. Facilitating Coalition Warfare through Technology Transfer and Information Sharing.* Center for Technology and National Security Policy: National Defense University, 2005.

Clausewitz, Carl von. *On War.* Edited and translated by Michael Howard and Peter Paret. Princeton: Princeton University Press, 1976; reprint edition. New York: Everyman's Library, Alfred A. Knopf, Random House, 1993.

Chernoff, Fred. *After Bipolarity.* Michigan: University of Michigan Press, 1995.

Clodfelter, Mark. *The Limits of Air Power: The North American Bombing of North Vietnam.* New York: The Free Press, 1989.

Collins, James C. *Good To Great And The Social Sectors : Why Business Thinking Is Not The Answer : A Monograph To Accompany Good To Great: Why Some Companies Make The Leap--And Others Don't.* Boulder, Colorado: J Collins, 2005.

Coram, Robert. *Boyd: The Fighter Pilot Who Changed the Art of War.* Boston: Little Brown, 2002.

Cordesman, Anthony H. *The Lessons and Non-Lessons of the Air and Missile Campaign in Kosovo.* Westport, CT: Praeger, 2001.

Dunnigan, James F. and Raymond M. Macedonia. *Getting It Right: American Military Reforms after Vietnam to the Gulf War and Beyond.* New York: William Morrow and Company, Inc, 1993.

Eisenhower, Dwight D. *Public Papers of the Presidents of the United States.* Washington D.C: National Archives and Records Service, Government Printing Office, 1957.

Freedman, Lawrence. *Europe Transformed: Documents on the end of the Cold War.* London: Tri-Service Press, 1990.

Gladwell, Malcolm. *Blink.* New York: Back Bay Books, 2007.

Grayson, George W. *Strange Bedfellows- NATO Marches East.* Maryland: University Press of America, 1999.

Hudson, William J. *Intellectual Capital: How to build it, enhance it, use it.* New York: John Wiley and Sons, 1993.

Huntington, Samuel P. *The Clash of Civilizations and the Remaking of World Order.* New York, Simon and Schuster, 1996.

Institute of Strategic Studies. Edited by Christopher Coker. *Globalisation and Insecurity in the Twenty First Century: NATO and the management of risk.* Oxford: Oxford University Press, 2004.

Kashmeri, Sarwar A. *NATO 2.0: Reboot or Delete?* Herndon, VA: Potomac Books, 2011.

Kernek, Sterling J. and Kenneth W. Thompson. *Foreign Policy in the Reagan Presidency: Nine Intimate Perspectives.* Maryland: University Press of America, 1993.

Kissinger, Henry. *Does America Need a Foreign Policy? Towards a Diplomacy for the 21st Century.* New York: Simon & Schuster, 2001.

LeGault, Michael R. *Th!nk.* New York: Threshold Editions, 2006.

Lindley-French, Julian. *The North Atlantic Treaty Organisation – An Enduring Alliance.* Abingdon, UK: Routledge, 2007.

Miller, Gregory. *No Exit: The Politics of NATO's Perseverance A Study of Alliance Durability.* Virginia: University of Virginia, 2009.

Moore, Rebecca R. *NATO's New Mission: Projecting Stability in a Post Cold War World.* Westport, CT: Praeger. 2007.

Nardulli, Bruce L., Walter L. Perry, Bruce Pirnie, John Gorgon IV and John G. McGinn. *Disjointed War: Military Operations in Kosovo, 1999.* Santa Monica: RAND, 2002.

Romjue, John L. *From Active Defence to Airland battle: The development of Army Doctrine 1973-1982.* Fort Monroe, VA: Historical Office United States Army Training and Doctrine Command, 1984.

Stanton, Shelby L. *The Rise and Fall of an American Army: US Ground Forces in Vietnam 1965-1973.* New York: Ballantine Books, 1985.

Stewart, Thomas A. *Intellectual Capital: The New Wealth of Organisations.* New York: Doubleday, 1997.

Thompson. Gary L. *Army Downsizing Following World War I, World War II, Vietnam, and A Comparison To Recent Army Downsizing.* Ft Leavenworth, KA: US Army Command and General Staff College, 2002.

Weinrod, Bruce W. and Charles L. Barry. *NATO Command Structure: Considerations for the Future.* Washington D.C.: National Defense University, 2010.

JOURNALS

Anon "International: Pressure Points; the Battle for Libya." *The Economist,* 399. (April 2011): 50-51.

Bailey, Beth. "The Army in the Marketplace: Recruiting an all-volunteer force". *The Journal of American History* 94, no. 1 (June 2007): 47-74. http://ezproxy6.ndu.edu/login?url=http://search.proquest.com/docview/224902993?accountid=12686 (accessed November 20, 11)

Byman, Daniel L. and Waxman, Matthew C. "Kosovo and the Great Air Power Debate." *International Security*, Vol. 24, No. 4, (April 2000): 5-38.

Cypher, James M. "Military Spending after the Cold War," *Journal of Economic Issues,* Vol. 25, No. 2 (June 1991): 607-615.

Enthoven, Alain C. and Wayne K. Smith "What Force for NATO? And From Whom. " *Foreign Affairs* Vol. 48, Issue 1, (October 1969): 80-96.

Etezoni, Amiati. "The Lessons of Libya." *Military Review,* Jan-Feb *2012* (January 2012).

Eyal, Dr Jonathan. "Accidental Heroes: Britain France and the Libya Operations." *Royal United Services Institute*, An Interim RUSI Campaign Report (November 2011):1-8.

Haass, Richard N. "The Age of Non-Polarity: What will follow US Dominance." *Foreign Affairs,* May/June 2008 (June 2008):1-7. http://www.foreignaffairs.com/articles/63397/richard-n-haass/the-age-of-nonpolarity (accessed 4 February 2012).

Hoag, Malcolm W. *"On NATO Pooling." World Politics,* Vol. 10, No. 3 (April 1958): 475-483.

Howard, Sir Michael. *"A Long War?" Survival.* 48 (December 2006):4.

_____. "Grand Strategy in the Twentieth Century." *Defence Studies*, Vol. 1. no. 1 (Spring 2001): 2.

_____. "Military Science in an Age of Peace*." Royal United Services Institute*, Vol 119, No 1 (March 1974): 7.

Kennan, George. "The Sources of Soviet Conduct." *Foreign Affairs* 25, no 4 (July 1947): 566-582.

Locher, James III. "Goldwater-Nichols: Fighting the Decisive Battle." *Joint Force Quarterly*, Summer 2002 (June 2002):38-48.

Murdock, Clark A. and Becca Smith. *"The Libyan Intervention: A Study In US Grand Strategy." Global Forecast for 2011* (June 2011): 61-63.

Norton, Augustus Richard, and Ashraf El-Sherif. "North Africa's Epochal Year of Freedom*." Current History Vol 110*, Issue 736 (May 2011):201-205.

Phillips, Charles E. Jr., T.C. Ting, and Steven A. Demurjian, "Information sharing and security in dynamic coalitions." *Proceedings of the Seventh ACM symposium on Access control models and technologies* (September 2002):87-96. http://doi.acm.org/10.1145/507711.507726 (accessed January 3, 2012).

Richardson, General William. "FM 100-5: The Airland Battle in 1986." *Military Review* 77, no. 1 (March 1986): 174-177.

Ripley, Tim. "Counting the Cost - Lessons of Libya for European Defence Polic*y." Janes Intelligence Review*, 23(6) (June 2011):18-22.

Sandler, Todd and John F.Forbes. "Burden Sharing, Strategy, And The Design Of NATO" *Economic Inquiry* July 18, 1980, 425 -444. http://Dx.Doi.Org/10.1111/J.1465-7295.1980.Tb00588.X (accessed January 2, 2012).

Underhill, Geoffrey. "Paved with Good Intentions: Global Financial Integration and the Eurozone's Response." *European Political Science*: EPS 10, no. 3 (June 2011): 366-74.

Valpolini, Paolo. "SR Easier than I." *Armada International*, Vol 2, (April 2010):46-50.

Wald, Patricia. "General Radislav Krstic: A War Crimes Case Study." *The Georgetown Journal of Legal Ethics* 16, no. 3 (2003): 445-72.

Western, John and Joshua Goldstein. "Humanitarian intervention comes of age: Lessons from Somalia to Libya." *Foreign Affairs* 90, no. 6 (November 2011): 48-59.

Williams, M.J. "(UN)Sustainable Peace-building: NATO's suitability for Post conflict Reconstruction in Multi-actor Environment." *Global Governance 17* (June 2011): 115-134.

MAGAZINES

Anon. "McCain decries 'backseat role' in Libya," *UPI.com*, May 1, 2011. http://www.upi.com/Top_News/US/2011/05/01/McCain-decries-backseat-role-in-Libya/UPI-33781304278241/ (accessed 21 Oct 2011).

Anon. "Always waiting for the US Cavalry." *The Economist,* June 10, 2011. http://ezproxy6.ndu.edu/login?url=http://search.proquest.com/docview/871281925?accountid=12686 (accessed November 3, 2011).

Anon. "It can Still Come Right; the Arab Awakening, Six Months on." *The Economist*, July 16, 2011. http://www.economist.com/node/18958377 (accessed September 12, 2011).

Cantone, Sergio. "Rasmussen says no ground troops for Libya." *Euronews Online,* March 28, 2011. http://www.euronews.net/2011/03/28/rasmussen-says-no-nato-ground-troops-for-libya/ (accessed November 1, 2011).

Clapper, James R. "How 9/11 transformed the intelligence community; its no longer about need to know. our guiding principle is responsibility to share." *Wall Street Journal (Online),* September 07, 2011. http://ezproxy6.ndu.edu/login?url=http://search.proquest.com/docview/887725336?accountid=12686. (accessed January 3, 2012).

Elliot, M. 'The Muddle in the Middle'. *Time Magazine*. April 23, 2011. http://www.time.com/time/magazine/article/0,9171,2068074,00.html (accessed September 1, 2011).

El Deeb, Sarah. "Arab League Asks UN For Libya No-Fly Zone" *Huffington Post,* March 12, 2011, http://www.huffingtonpost.com/2011/03/12/arab-league-asks-un-for-libya-no-fly-zone_n_834975.html (accessed October 21, 2011).

Entous, Adam and Barnes, Julian E. "US Pursues Sale of Armed Drones," *Wall Street Journal,* December 15, 2011. http://ezproxy6.ndu.edu/login?url=http://search.proquest.com/docview/910931892?accountid=12686. (accessed January 2, 2012).

Fiorenza, N. "NATO cuts more Fat." *Aviation Week*, June 9, 2011. http://www.aviationweek.com/aw/blogs/defense/index.jsp?plckController=Blog&plckScript=blogScript&plckElementId=blogDest&plckBlogPage=BlogViewPost&plckPostId=Blog:27ec4a53-dcc8-42d0-bd3a-01329aef79a7Post:4b17eb48-40b4-460c-a6bb-01d877f22f62, (accessed October 22, 2011).

Gates, Robert. "Gates' Speech on the NATO Strategic Concept, February 2010."*Council on Foreign Affairs,* February 11, 2010. http://www.cfr.org/nato/gates-speech-nato-strategic-concept-february-2010/p21518 (accessed September 25, 2011).

Gomis, Benoit. "Franco-British Defence Cooperation after Libya." *Chatham House*, November 2, 2011.http://www.chathamhouse.org/media/comment/view/179253 (accessed November 21, 2011).

Hartwell, David. "NATO relearns old lessons on Libya," *IHS Janes,* September 30, 2011. http://www4.janes.com/subscribe/jiaa/doc_view.jsp?K2DocKey=/content1/janesdata/mags/jiaa/history/jiaa2011/jiaa5364.htm@current&Prod_Name=JIAA&QueryText= (accessed October 1, 2011).

Kane, Tim. "Global US Troop Deployment, 1950-2003." *The Heritage Foundation*, October 27, 2004. http://www.heritage.org/research/reports/2004/10/global-us-troop-deployment-1950-2003 (accessed November 21, 2011).

Kington, Tom. "Italian Military Hit by 10% Budget Cut," *DefenceNews*, May 29, 2011, http://www.defensenews.com/article/20100527/DEFSECT02/5270303/Italian-Military-Hit-by-10-Budget-Cut, (accessed February 25, 2012).

Kitfield, James. "Obama: The Reluctant Warrior on Libya." *National Journal,* March 19, 2011. http://www.nationaljournal.com/nationalsecurity/obama-the-reluctant-warrior-on-libya-20110319 (accessed October 3, 2011).

Muller, Albrecht. "German Military To Cut Troops, Generals." *DefenseNews Online*, May 18, 2011. http://www.defensenews.com/story.php?i=6543754 (accessed October 5, 2011).

Roisevelt, Ann. "Nations share information on Afghan Mission Network," *C4I News,* August 24, 2010. http://www.defensedaily.com/publications/dd/11107.html (accessed October 31, 2011).

Rousseau, Richard. "Why Germany Abstained on UN Resolution 1973 on Libya." *Foreign Policy Journal,* June 22, 2011. http://www.foreignpolicyjournal.com/2011/06/22/why-germany-abstained-on-un-resolution-1973-on-libya/ (accessed October 21, 2012).

Train, Pierre. "France Raises Defense Budget 1.6 Percent," *DefenceNews*, September 29, 2011. http://www.defensenews.com/article/20110929/DEFSECT05/109290305/France-Raises-Defense-Budget-1-6-Percent, (accessed February 27, 2012).

Tirpak, John A. "Lessons from Libya." airforce-magazine.com, November 8, 2011. http://www.airforce-magazine.com/Features/airpower/Pages/box110811libya.aspx (accessed January 29, 2012).

WEBSITES

Anon. "Arab League Backs Libyan No-Fly Zone." BBC Online.

http://www.bbc.co.uk/news/world-africa-12723554 (accessed October 30, 2011)

Anon. "NATO chief Rasmussen 'proud' as Libya mission ends," BBC Online .
http://www.bbc.co.uk/news/world-africa-15516795 (accessed November 7, 2011).

Anon, "Treaty establishing the European Economic Community, EEC Treaty," Europa.
http://europa.eu/legislation_summaries/institutional_affairs/treaties/treaties_eec_en.htm
(accessed January 24, 2012).

Anon. "Libya crisis in Maps. Day by Day." BBC Online, http://www.bbc.co.uk/news/world-
africa-12860014 (accessed January 24, 2012).

Anon. "NATO after Libya. A troubling victory." *The Economist*, September 3, 2011 under
"NATO loose initiative in Libya," http://www.economist.com/node/21528248 (accessed
September 12, 2011).

Associated Press. "Panetta: Army to Withdraw 2 Brigades From Europe." NPR.Org.
http://www.npr.org/templates/story/story.php?storyId=145133867 (accessed February
12, 2011).

Blight, Gary, Sheila Pulman and Paul Torpey. "The Arab Spring an Interactive Timeline."
guardian.co.uk. http://www.guardian.co.uk/world/interactive/2011/mar/22/middle-east-
protest-interactive-timeline (accessed November 1, 2011).

CNN Wire Staff. "Leaders call for more NATO strikes as Gadhafi forces pummel Misrata."
CNN Online. http://articles.cnn.com/2011-04-12/world/libya.war_1_civilians-gadhafi-
forces-airstrikes?_s=PM:WORLD (accessed October 3, 2011).

_____. 'Overwhelmed rebel fighters flee from eastern Libyan city." CNN online.
http://articles.cnn.com/2011-04-07/world/libya.war_1_nato-aircraft-rebel-fighters-
gadhafi?_s=PM:WORLD (accessed October 3, 2011).

_____. "Diplomats talk amid fierce fighting in key Libyan City." CNN Online
http://articles.cnn.com/2011-04-09/world/libya.war_1_libyan-rebel-stronghold-rebel-
forces-libyan-city?_s=PM:WORLD (accessed October 4, 2011).

Defence Academy of the UK. " Advanced Command and Staff Course." MOD Web.
https://da.mod.uk/colleges/jscsc/acsc (accessed January 6, 2011).

Densmore, Robert. "French Pilots Over Libya Decline US Intel; Clearance Just Too Slow," AOL
Defense. http://defense.aol.com/2011/09/21/french-pilots-over-libya-decline-us-intel-
clearance-just-too-sl/ (accessed February 19, 2012).

Department of the Air Force. "Factsheet RQ-4 GLOBALHAWK, " USAF Website.
http://www.af.mil/information/factsheets/factsheet.asp?id=13225 (accessed February 29,
2012).

Di Paola, Admiral Giampaolo. "NATO - Opinion: Speech by Admiral Giampaolo Di Paola, Chairman of the NATO Military Committee" 57th Annual Session of the NATO Parliamentary Assembly, Bucharest, Romania , 08-Oct.-2011" NATO Live. http://www.nato.int/cps/en/natolive/opinions_79333.htm (accessed November 3, 2011).

Donilon, Tom. "The continuing need for a strong NATO." The Washington Post. http://ezproxy6.ndu.edu/login?url=http://search.proquest.com/docview/900749709?accountid=12686 (accessed December 28, 2011).

Gates, Robert M. "Blunt US Warning Reveals Deep Strains in NATO," NY Times.com, http://www.nytimes.com/2011/06/11/world/europe/11nato.html?pagewanted=all (accessed January 29, 2011).

Global Security. "Distributed Common Ground Station." Global Security.org. http://www.globalsecurity.org/intell/systems/dcgs.htm (accessed December 28, 2011)

HQ Air North. "The Afghanistan Mission Network." NATO Online. http://www.airn.nato.int/focus_areas/mjo/articles/mjo0310.htm (accessed February 12, 2012).

Joint Forces Staff College. "JAWS Course description." NDU Website. http://www.jfsc.ndu.edu/schools_programs/jaws/course_materials.asp. (accessed January 6, 2011).

Laing, Aislinn. "Col Gaddafi could flee to Venezuela or Cuba," Telegraph Online. http://www.telegraph.co.uk/news/worldnews/africaandindianocean/libya/8716171/Libya-Col-Gaddafi-could-flee-to-Venezuela-or-Cuba.html (accessed February 11, 2012).

Malone, Barry. "Gaddafi killed in Home Town," Reuters. http://www.reuters.com/article/2011/10/20/us-libya-idUSTRE79F1FK20111020 (accessed January 3, 2012).

McGovern, Senator George."Senator McGovern Acceptance Speech at Democratic National Convention Miami Beach, Florida July 14, 1972." 4President.org. http://www.4president.org/speeches/mcgovern1972acceptance.htm (accessed October 12, 2011).

Munoz, Carlo. "Abrial: NATO Closing ISR, Intel Sharing Gaps Exposed In Libya." AOL Defence. http://defense.aol.com/2011/11/22/abrial-nato-closing-isr-intel-sharing-gaps-exposed-in-libya/ (accessed February 11, 2011).

NATO. "NATO Chicago Summit in 2012." NATO Website. http://www.nato.int/cps/en/natolive/news_82097.htm (accessed January 23, 2012).

_____. "NATO Mediterranean Dialogue." http://www.nato.int/cps/en/SID-9077D7FF-1A7142EA/natolive/topics_60021.htm? NATO Website (accessed February 5, 2012).

_____."NATO Secretary General calls for "Smart Defence" at Munich Conference." NATO Website., http://www.nato.int/cps/en/natolive/news_70327.htm (accessed February 5, 2012).

_____. "Transformation Network." NATO Website, https://transnet.act.nato.int/WISE/Entities/BICES, (accessed February 12, 2012).

_____. "Oberamergau Planning course syllabus." NATO Website. https://www.natoschool.nato.int/academics.asp (accessed 12 February 2012).

_____. "Statement by the NATO Secretary General on Libya arms embargo". NATO Website. http://www.nato.int/cps/en/SID-E403D555-2A5EEC9A/natolive/news_71689.htm?mode=pressrelease (accessed October 28, 2011).

_____. "Ex STEADFAST JUNO." NATO Website. http://www.arrc.nato.int/page88402435.aspx (accessed October 30, 2011).

_____. "NATO Defense College Senior Course Aims." NATO Defense College. http://www.ndc.nato.int/education/courses.php?icode=14 (accessed December 27, 2011).

_____. "Statement by NATO Secretary General following the United Nations Security Council Resolution 1973." NATO Website. http://www.nato.int/cps/en/natolive/news_71640.htm (accessed September 3, 2011).

_____. "Statement by NATO Secretary General Anders Fogh Rasmussen on Libya." NATO Website. http://www.nato.int/cps/en/natolive/71679.htm (accessed October 21, 2011).

Nelson, Jack and James Gerstenzang. "The Washington Summit. Gorbachev Focuses on Long-Range Missiles Arriving in Capital, He Challenges Reagan to Provide `New Words' on Reduction Proposals." Los Angeles Times. http://ezproxy6.ndu.edu/login?url=http://search.proquest.com/docview/292759921?accountid=12686. (accessed November 10, 2011).

Offenbach, Seth. "The Other Side of Vietnam: The Conservative Movement and the Vietnam War." ProQuest Dissertations & Theses(PQDT). http://ezproxy6.ndu.edu/login?url=http://search.proquest.com/docview/857640022?accountid=12686. (accessed October 11, 2011)

Pearlman, Jonathan. "US will shift focus from Middle East to Asia Pacific, Barack Obama declares." The Telegraph Online. http://www.telegraph.co.uk/news/worldnews/barackobama/8895726/US-will-shift-focus-fromMiddlEastto-Asia-Pacific-Barack-Obama-declares.html (accessed November 20, 2011).

Peniston, Bradley. "Budget Cuts reducing NATO's planned UAV purchase." ACUS.org http://www.acus.org/natosource/canada-withdraws-nato-uav-program (accessed 28 Dec 2011).

Pincus, Walter. "Clapper, Double Digit Cuts coming to Intel Community." Washington Post . http://www.washingtonpost.com/blogs/checkpoint-washington/post/clapper-double-digit-cuts-coming-for-intel-budget/2011/10/17/gIQAbSvIsL_blog.html (accessed January 2, 2012).

Pockock, Chris. "German Defense Cuts Force Renegotiation with EADS." AIN Online. http://www.ainonline.com/?q=aviation-news/ain-defense-perspective/2011-11-04/german-defense-cuts-force-renegotiation-eads (accessed January 23, 2011).

Powers, Rod. "Army Enlisted Job Descriptions and Qualification Factors 35F - - Intelligence Analyst." About.com-militaryjobs. http://usmilitary.about.com/od/enlistedjobs/a/96b.htm (accessed January 29, 2012).

President of the United States. "Remarks by the President on the Situation in Libya." Whitehouse.gov. http://www.whitehouse.gov/the-press-office/2011/03/18/remarks-president-situation-libya (accessed November 8, 2011).

_____. "Obama's Remarks on Libya." NY Times.com. http://www.nytimes.com/2011/03/29/us/politics/29prexy-text.html?pagewanted=2&_r=1&ref=africa (accessed September 25, 2011).

Reid, Dr Edna. "Information Professionals as Intelligence Analysts: Making the Transition." GovernmentInfo Pro. http://www.governmentinfopro.com/federal_info_pro/2010/01/information-professionals-as-intelligence-analysts-making-the-transition.html (accessed January 29, 2012).

Secretary of the Air Force. "AIR FORCE INSTRUCTION 14-117." US Air Force. http://www.e-publishing.af.mil/shared/media/epubs/AFI14-117_AFGSCSUP_I.pdf, (accessed February 12, 2012).

Staudacher, Generalmajor Erich. "The Afghanistan Mission Network (AMN) Reaping the Rewards of Network-Enabled Operations." NATO Website. http://www.nc3a.nato.int/SiteCollectionDocuments/GM's%20Koblenz%20IT%20Speech%202011%20reviewed%20GM.pdf (accessed January 27, 2011).

Traynor, Ian. "US Defence chief blasts Europe over NATO." Guardian Online. http://www.guardian.co.uk/world/2011/jun/10/nato-dismal-future-pentagon-chief, (accessed February 11, 2012).

UK MoD. "Launch of the Intelligence Fusion Centre." Security Oracle. http://www.securityoracle.com/news_articles/Security_news/NATO_Intelligence_Centre_Opens_In_UK_11468.htm (accessed January 3, 2012).

US Air Force. "Careers: Operational Intelligence Analyst," US Air Force.com. http://www.airforce.com/careers/detail/operations-intelligence-specialist/ (accessed February 12, 2012).

US Department of State "Background Note: Libya." state.gov. http://www.state.gov/r/pa/ei/bgn/5425.htm (accessed November 20, 2011).

US Air Forces Europe. "501st Combat Support Wing," USAFE.AF.Mil. http://www.501csw.usafe.af.mil/units/molesworth/index.asp (accessed December 28, 2011).

PRINT MEDIA

Anon. "Lessons for Libya," *Financial Times*, March 19, 2011.

VIDEO

ITN News. "Gaddafi parades through Tripoli in an Open Top Car." You Tube. http://www.youtube.com/watch?v=lJC7smNa9jo (accessed January 27, 2012).

LECTURE

Weighill, Brigadier Robert. "Libya Brief." Lecture to Joint Forces Staff College, Norfolk, VA March 20, 2012.

PUBLICATIONS OF GOVERNMENT DEPARTMENTS AND AGENCIES

BMT Hi-Q Sigma Ltd. *White Paper. The Implications of the SDSR*.Bristol, UK, BMT Hi-Q Marketing Department, 2010.

Harrison, Todd. *Defense Funding in the Budget Control Act of 2011.* Washington: Center for Strategic and Budgetary Assessments, 2011.

HM Government, *Securing Britain in an Age of Uncertainty: The Strategic Defence and Security Review*. London: The Stationary Office, 2010.

HM Treasury, *Spending Review 2010*. London: The Stationary Office, 2010.

Lake, Anthony. "From Containment to Enlargement." *US Department of State Dispatch 4*, no. 39 (September 1993).

US Department of Defense. Comptroller. *National Defense Budget Estimates for FY 2012*. Washington D.C.: Department of Defense, 2011.

US Department of Defence. *Defence Budget: Priorities and Choices*. Washington D.C.: Government Printing Office, 2012.

US Joint Chiefs of Staff. Joint and Coalition Operational Analysis. *Libya: Operation ODYSSEY DAWN (OOD). A Case Study in Command and Control.* Joint and Coalition Operational Analysis (JCOA). Suffolk, Virginia, 2011.

Joint Publications

US Department of the Army. TRADOC. *Pamphlet 525-5,Military Operations: Operational Concepts for the Air-Land Battle and Corps Operations* (March 1981) – Virginia: TRADOC, March 1981.

US Joint Chiefs of Staff. *Joint Operation Planning*. Joint Publication 5-0. Washington DC: Joint Chiefs of Staff, August 11, 2011.

National Security Strategy

US President. *National Security Strategy*. Washington D.C: Government Printing Office, May 2010.

_____. The *National Security Strategy of the United States of America*. Washington D.C: Government Printing Office, Mar 2006.

_____. *Sustaining Global Leadership: Priorities for 21st Century Defense*. Washington DC: Government Printing Office, January 2011.

Chairman of the Joint Chiefs of Staff. *The National Military Strategy of the United States of America*. Washington D.C: Government Printing Office, February 2011.

Congressional Research Service Reports

Congressional Research Service. *NATO Common Funds Burden sharing: Background and Current Issues*. Congressional Research Service, Washington DC: Government Printing Office. April 22, 2010.

NATO Publications

Allied Command Operations. *Comprehensive Operations Planning Directive*. Supreme Headquarters Allied Power Europe, Belgium, December 2010.

_____. *MC-471/1, NATO Targeting Policy*. Supreme Headquarters Allied Power Europe, Belgium, June 2007.

Allied Command Transformation. *DRAFT ACT Support to Operation UNIFIED PROTECTOR Analysis Report*. Supreme Allied Command Transformation, Norfolk, Virginia 2011.

_____. *DRAFT Proposal for New Deliverable – Joint Fires Integration*. Supreme Allied Command Transformation, Norfolk, Virginia, 2011.

Heads of State of Government of the North Atlantic Council. "Prague Summit Declaration" NATO website. http://www.nato.int/docu/pr/2002/p02-127e.htm (accessed October 29, 2011).

North Atlantic Treaty Organization. *NATO Handbook, The North Atlantic Treaty*. Brussels: NATO Office of Information and Press, 2006.

Secretary General of NATO. *Strategic Concept. For the Defence and Security of The Members of the North Atlantic Treaty Organisation.* Brussels, NATO Public Diplomacy Division. 2010.

UNITED NATIONS PUBLICATIONS

United Nations Security Council. "UNSCR 1970." UN.org. http://www.un.org/News/Press/docs/2011/sc10187.doc.htm (accessed November 1, 2011).

_____. "UNSCR 1973." UN.org. http://www.un.org/News/Press/docs/2011/sc10200.doc.htm#Resolution (accessed November 1, 2011).

Wing Commander John Stewart Williamson RAF

Most recently, Wg Cdr John Williamson was a Staff Officer in Head Quarters Air Command, responsible for the sustainment and development of the processing, exploitation and dissemination of the RAF Intelligence, Surveillance and Reconnaissance capability. Wg Cdr Williamson was commissioned in 1997 from RAF College Cranwell. Following initial training Wg Cdr Williamson has filled numerous intelligence positions including commanding the operations squadron at the Tactical Imagery-Intelligence Wing, Station Intelligence Officer for the Joint Force Helicopter Command in Northern Ireland and Military Advisory to Chief of Defence Intelligence. Wg Cdr Williamson has deployed to Afghanistan, Iraq, and most recently to Ramstein, Izmir and CAOC 5 in Italy to support NATO operations in Libya. Wg Cdr Williamson is a graduate of Lancaster University and has a degree in Geography.